PROCEEDINGS
NORTHERN POPULATION WORKSHOP II

ACTES DU DEUXIÈME COLLOQUE SUR LES POPULATIONS NORDIQUES

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Comité de Recherche sur les Populations Nordiques

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ACTES DU DEUXIEME COLLOQUE

SUR LES POPULATIONS NORDIQUES

Centre for Northern Studies and Research
McGill University
Montreal, Québec

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FOREWORD

As the first speaker in this workshop points out, a great deal has happened in the field of northern population research since the early 1970's.

Scientists who attended the Mont-Gabriel Seminar on Guidelines for Scientific Activities in Northern Canada learned that as recently as 1971 very little demographic studies in the North had been supported by the Federal Government. Dr. Milton Freeman, a major participant in that Seminar, emphasized the desperate need for formal demographic studies, as well as research into social, economic, and behaviourable matters as they affect northern populations.

Subsequent to the Mont-Gabriel Seminar the Federal Government supported a limited number of demographic studies, but demographic research continued to be far from adequate - and in some areas almost totally lacking. Yet the need for population data of all kinds was clearly recognized as a fundamental requirement for policies and programs to provide for effective resource and economic development, and an improved quality of life in the North.

Thus it was that the 1976 Northern Population Workshop I was considered as a significant and fortuitous event. (1)

The Workshop brought together, for the first time, researchers and policy makers, to review the quantative and qualitative aspects of northern population data and to make recommendations to statistical agencies of ways to improve the range of data available.

Workshop I also reviewed demographic research being undertaken to determine areas of neglect and overlap, and it examined possibilities of a more planned approach to northern demographic research among government and non-government agencies.

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(1) See proceedings and summary reports published by, and available from, Arctic Institute of North America, University Library Tower, 2920 - 24th Ave. N.W. Calgary, Alta, T2N 1N4.

In particular, the Workshop brought out the need to understand demography in its broader sense, and for closer cooperation with northern people in all activities associated with northern population studies.

Workshop I was witness to the stirrings of general interest in a field of research which had been neglected for too long.

These proceedings are witness to a workshop of a different nature - and a reflection of the substantial positive changes that have occurred in the field since the first workshop in 1976.

The Workshop II objectives were to bring up-to-date the state of the art of northern population research, and to demonstrate how the focus of research has changed from a primary concern about data and statistical methodology to an emphasis on the dynamics of social, economic and behavioral aspects of population.

The Workshop objectives also reflected the increasing interest in mission oriented research which is relevant to practical socio-economic problems as perceived by northerners themselves. The enthusiastic interest and participation of native northerners in Workshop II illustrates the importance that is beginning to be attached to the benefits of closer cooperation between researchers, policy makers, and the inhabitants of the North.

The Northern Population Research Committee, by continuing to encourage research in this area; by organizing other workshops, and by arranging for the publication of significant studies, or reports such as these proceedings, hopes that it may continue to play a helpful role as a clearing-house of information on the northern populations of Canada.

Ken de la Barre
Secretary - Northern Population Research Committee (November 1980)

AVANT-PROPOS

Comme nous le fait remarquer notre premier conférencier, la recherche sur les populations nordiques s'est beaucoup développée depuis le début des années '70.

Les spécialistes qui ont assisté au séminaire du Mont-Gabriel sur les Directives concernant les activités scientifiques dans le Nord canadien, y ont appris que jusqu'à une date très récente, 1971, très peu d'études démographiques dans le Nord avaient bénéficié d'un support gouvernemental fédéral.

Un des participants importants à ce séminaire, le professeur Milton Freeman, a insisté sur l'urgence d'un besoin pour des études formelles en démographie, ainsi que sur les questions sociales, économiques et de comportement qui touchent les populations nordiques.

Suite au séminaire du Mont-Gabriel, le gouvernement fédéral a soutenu un nombre limité d'études démographiques mais la recherche en démographie continue d'être insuffisante, sinon, dans certaines régions, totalement absente.

De plus, le besoin d'informations de tout genre sur les populations a été clairement reconnu comme étant une exigence fondamentale pour les programmes et politiques dirigés vers un développement efficace de l'économie et des ressources ainsi que pour l'amélioration du niveau de vie dans le Nord.

C'est ainsi que le premier colloque sur les populations nordiques de 1976 devint un événement imprévu mais significatif. (1)

Ce colloque réunissait pour la première fois, des chercheurs et des agents gouvernementaux dans le but d'examiner les aspects qualitatifs et quantitatifs de l'information sur les populations nordiques mais aussi pour faire des recommandations aux agences statistiques sur les moyens susceptibles d'élargir le champ de l'information disponible.

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(1)Voir les Actes et rapports sommaires, publiés par l'Institut Artique d'Amérique du Nord, où ils sont accessibles. (University Library Tower, 2920 - 24th Ave. N.W. Calgary, Alberta, T2N 1N4).

Ce premier colloque a aussi reconsidéré les aires de recherches démographiques déjà entreprises, afin de déterminer les aspects soit, négligés, soit, risquant de dupliquer un travail déjà fait. De plus, les possibilités d'une approche à la recherche démographique nordique mieux planifiée chez les agences gouvernementales et non-gouvernementales furent examinées.

Le colloque a tout particulièrement souligné la nécessité de comprendre la démographie dans son sens le plus large, tout en cherchant une meilleure collaboration avec les populations nordiques dans ses activités de recherches.

Le colloque fut le témoin des premières manifestations d'un intérêt général envers un champ de recherche trop longtemps négligé.

Ces Actes témoignent d'un colloque d'une nature différente et reflètent les changements substantiels et positifs qui ont marqué ce domaine depuis le premier colloque de 1976.

Le deuxième colloque avait pour but de mettre à jour l'état de la question dans la recherche sur les populations nordiques et de démontrer comment le point central de la recherche a passé d'un intérêt primordial pour l'information et la méthodologie statistiques à l'insistance sur la dynamique des aspects sociaux, économiques et de comportements des populations.

Les buts de ce deuxième colloque reflétaient aussi un intérêt accru pour les recherches à but précis se rapportant aux problèmes socio-économiques pratiques, tels que perçus par les gens du Nord eux-mêmes.

L'intérêt et la participation enthousiaste des gens du Nord eux-mêmes, lors du deuxième colloque, montre bien à quel point la collaboration étroite entre les chercheurs, les agences gouvernementales et les gens du Nord, prend de l'importance.

Par son encouragement à la recherche dans ce domaine, parce qu'il organise d'autres colloques, parce qu'il contribue à la publication d'études significatives ou de rapports tels que celui-ci, le Comité de Recherche sur les Populations Nordiques espère continuer à se rendre utile en tant que diffuseur d'informations sur les populations nordiques du Canada.

K. de la Barre

Ken de la Barre
Secrétaire - Comité de Recherche sur les Populations Nordiques
Novembre 1980

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OBJECTIVES

NORTHERN POPULATION WORKSHOP II

1. To provide a non-technical forum for the review and discussion of demographic research relevant to the Canadian North which has recently been completed, or research which is underway, or research which is planned for the near future. The emphasis would be on demographic changes, and on the social, economic, and behavioral aspects of population which might explain in practical terms the dynamics of population change in the North for planning purposes in such fields as housing, health, education, and social and environmental impact studies.

2. To provide an opportunity of gaining the interest and cooperation, (and the participation), of the native people and other northerners in demographic research by:

   A: inviting native people, and other northerners, to comment on perceived demographic problem areas with respect to their communities or regions; and

   B. by having researchers in turn identify the use to be made of quantitative demographic data and interpretive studies in relation to practical socio-economic problems, and the benefits to be derived from such studies by the people in the North.

3. To examine a demographic "case study" in the North and discuss, at the conceptual level, the background, the results, and the implications of the report by L.E. Hamelin on the population of the Northwest Territories.

BUTS

DEUXIEME COLLOQUE SUR LES POPULATIONS NORDIQUES

1. Fournir le cadre d'un forum non-technique qui permette l'examen et la discussion sur la recherche en démographie, pertinente au Nord canadien, qui a déjà été accomplie récemment, qui se fait actuellement ou qui fait état de projets futurs. Ce forum doit souligner particulièrement les changements démographiques, ainsi que les aspects sociaux, économiques et de comportement de population, lesquels en termes pratiques, devraient expliquer la dynamique des changements de population dans le Nord en vue d'une planification dans les domaines de l'habitation, de la santé, de l'éducation et des études d'impact de l'environnement.

2. Fournir l'opportunité au développement de l'intérêt et de la coopération (ainsi que la participation) des autochtones et des autres résidents du Nord, pour la recherche en démographie; pour ce faire, il faut

   A: inviter les autochtones et autres gens du Nord à exprimer leur vision des aspects démographiques problématiques en ce qui concerne leurs communautés ou leurs régions. Ensuite,

   B: inciter les chercheurs à leur tour, à identifier l'utilisation future de l'information démographique quantitative, des études analytiques en relation avec des problèmes socio-économiques pratiques et les avantages découlant de ces études pour les gens du Nord.

3. Examiner une étude de cas en démographie et discuter au niveau des concepts, les fondements, résultats et implications du rapport de L.-E. Hamelin portant sur la population des Territoires du Nord-Ouest.

NORTHERN POPULATION WORKSHOP II

DAY I

DECEMBER 10, 1979

DEUXIEME COLLOQUE SUR LES POPULATIONS NORDIQUES

JOUR I

10 DECEMBRE 1979

OPENING STATEMENT / PROPOS D'OUVERTURE

GENERAL CHAIRPERSON / PRESIDENT DU COLLOQUE

W. KEMP

Centre for Northern Studies and Research
McGill University
and
Makivik Corporation

We are assembled as a group of demographers or social scientists or whatever term we use to classify ourselves as people interested in the North and in northern population problems. Some of us are interested for reasons of academic work; others of us are interested because we see the implications of northern demography in our day-to-day work. I think a very important goal of this conference is to try to get those two sides together. We are interested in hearing what the academics have to say, but we wish to make sure that things they say that have relevance to change in the North, are in practice understood and developed in the context of actual northern institutions.

The programme is set up in such a way to foster this type of association. We have arranged the first session this morning to be primarily that of papers and a more formal presentation that will continue through the afternoon. Then tomorrow we will really deal with issues and problems as they occur in the North. The informal seating arrangement that we have today to listen to papers will shift tomorrow to a round table where we have the main discussions sitting next to each other.

I would like to welcome all of you especially those who have come from the North. The Cree contingent is not yet here. I got a call this morning and their barge got stuck coming out of Fort George so as soon as the ice moves and the barge moves, the Crees will be in, perhaps by this afternoon. I would also like to mention that the funding for this conference, at least some of the funding has been secured through the Social Science Research Council which contributed $2500. and through the Northern Social Research Division which has contributed $3500., so we have been able to get things together here and we appreciate the people and the institutions involved.

Well, we are a little late and my name is Bill Kemp. I should have said that first but I am always nervous in these situations. I am General Chairman. General Chairman isn't usually a very important job but nevertheless I hope to serve some function during the next couple of days. I would like now to introduce Milton Freeman, who is the new Science Advisor for the Department of Indian Affairs.

I think you who have followed demography will remember that Milton started a lot of controversy and concern with northern demography in the workshop that was held in 1972. For eight years people have been considering Milton's paper, using it to document the need for a group like the Northern Demography Workshop group.

Furthermore, they have been improving on it in terms of research and thought and study. Now we are ready to listen to what people have to say and we hope we will come out of the two-day session with some real directions, with some real goals; not only academic but ones that will be consistent with what should happen and what will happen in the North. So, without further ado I would like to introduce Milton Freeman.

INTRODUCTION

M. FREEMAN

Senior Science Advisor
Department of Indian and Northern Affairs

Thanks Bill. I am glad to think that what little I have to say has not been contradicted already by Bill's introductory remarks. I am not actively involved at this time in population research so to some extent I had to have my arm twisted to come along, but I am quite concerned as well as interested in the topic we are addressing and I hope that some thoughts might help to start the ball rolling.

When I last spoke on the subject of population research in the North I was able to state that there was an acute need for the most basic and fundamental studies to fill the void that existed at that time. But it's quite apparent now, when we refer to the literature, and particularly to the first workshop proceedings that came out of this Committee on Northern Population Research and the bibliography that they have prepared, that many of the pressing needs are indeed being effeotively addressed.

At the 1976 workshop, Nancy Howell, who is I suppose, one of the leading demographers of small populations in Canada, was able to say that in her view there was little scientific justification for continuing the invasion of privacy to which certain types of demographic research necessarily subject the target population. We would do well to remember that the present regulatory structures in the Northwest Territories, which require people to be licensed when undertaking research, stem directly to the violent reaction of the Baker Lake Inuit in 1974. They were subjected to a very intrusive and unfortunate demographic study, a historical demographic study undertaken by a doctoral student. I am sure that nobody here objects to this new principle, to this type of licensing and the type of policing of social research that now goes on in the North. A reading of the Northwest Territories debates and the northern press in 1974 shows the extent to which demographic enquiry generates intense feelings of anguish and anger.

It's important to mention this, and not by way of attempting a defense of my advocacy at Mont Gabriel for more demographic research.

It's important to mention the climate of the times when I made that statement and advocated much more northern demographic work. For many active in demography in Canada, particularly younger researchers, it is hard to realize the extent of backwardness of affairs in the population field in general in Canada at that time. So my remarks at Mont Gabriel were largely out of frustration and the need to try to inject awareness into political and policy-making circles that Canada, without a demographic population policy, without any demographic intelligence, was at that time trying to take a world leadership role in environmental problems.

Remember the Stockholm conference? The Canadian position paper that was prepared made no mention whatsoever of human population problems. It was not part of the consciousness in governmental circles at that time. There was one influential voice raised in Canada which proclaimed the need and the urgency of addressing the ignorance that was then widespread, and it was that of the then Chairman of the Science Council of Canada, Dr. Omand Solandt and I am sure it's not gone unnoticed by many people here that the Science Advisory Board of the Northwest Territories whose Chairman he is now, has commissioned the demographic study by Dr. Hamelin of which forms part of our discussions at this meeting.

But enough of history. What of the future? I suggest the appropriate manner of proceeding has been suggested by two speakers of the first population workshop in North Hatley that many of you attended. First, utilitarian rather than scientific criterion should guide the selection of research topics as Professor Howe said, and second, the time has come to seek human rather than mechanical solutions to modern population problems, as was suggested by Professor Ron Duffy.

If we can accept these directives, what, in specific terms, is our role as researchers? Again, in general terms, we see that research often goes through an evolutionary sequence of events - a priorizing of researcher's objectives, if you will. First there is the need to know: that early stage, when curiosity to find out provides an intense and quite justifiable raison d'être for activity. Second, there is the reflective, somewhat removed, working-up stage when the ordering, not hypothesizing, the model building, testing of the models, logically follows from the acquisition of the respectable corpus of data.

The third period which follows is very often the time when some people knowledgeable and active in the field start becoming concerned that there may be a possible or an actual misuse of the information that they have made available. There may be a misinformed misapplication, if we can use those words, following from erroneous interpretation of results. Various programmes and policies in the public policy arena are advanced which seek rationalization and legitimation by species linkage with authoritative objective research findings. This is the

time when some researchers may get provoked or even hurt by misinterpretation or misapplication of their work. However this can and sometimes does lead to a useful reaction from the research community, namely the desire to be heard, and sometimes a desire to be involved. In other words a commitment develops to hang in there and work with the data, or work with the applications of the data, or ensure there is not a misapplication of the data and the research findings.

In the context of northern population studies, the close liaison which is engendered by the sponsorship of these workshops, by the Department of Northern Affairs, and the interest and support that has been shown through participation of members of various governments, provincial and territorial, and several native courts of management, native associations and so on, should make researchers acutely aware of the policy relevance of their work. Therefore I am sure most people are quite tuned in to the need for vigilance. When working in policy-relevant areas it is not enough to make the information freely available and then opt out. Rather there is a need to remain involved, to remain committed to the principle and the realization that knowledge often forms the basis or justification for political action, or for political inaction when action is required.

I have written of these problems elsewhere. The topic of accountability is a very important one and, for those who are interested, I would like to say more, but I don't think this is the best moment to do so. I have brought copies of a paper that deals with accountability and policy-relevant research in the social sciences.* This paper speaks of the problems, ethical and practical, inherent in the advocacy position. The only part of the paper that I would repeat now, by way of emphasis, is to say that, in today's world, the credibility of an individual as a scientist is dependent upon the degree to which others use his work; others in policy rather than in the social sciences. For this reason, the scientist should have a strong vested interest in working with or for agencies that operate in the public policy arena.

There are many ways in which population-related research articulates with public policy. Many of these ways have been explored in the earlier workshop and they will be the subject of much discussion at this workshop. I would like to come back to Professor Duffy's observation of the need for human rather than computer answers to pressing policy issues. This argues for a socially informed demography rather than one with an undue concern for numerology. And the social reference point should be especially informed by

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* Freeman, Milton, "Anthropologists and policy-relevant research, the case for accountability", reprinted from Applied Anthropology in Canada, Proceedings No. 4, pages 139-166, Canadian Ethnology Society: Hamilton 1977.

the reality of the target population being studied. In other words, when I say socially informed, I don't mean from our perspective but that it should be sensitive, culturally and socially, to the concerns of the population under study.

I would like to give you an example of the danger of ethnocentrism and, so that I'm not pointing a finger at anybody, I'll take one from my own earlier work. I don't mind admitting that this mistake was mine.

First, on a general level, we should recognize that underlying any research endeavour must be the investigator's realization that a problem exists, an intellectual problem if not a practical problem. The definition of that situation, the priorizing of the stages of research that follow the identification of the critical variables that one will work with, are activities that reflect a particular value orientation held by the investigator and, if the criteria applied are inappropriate, then the research findings may be trivial at best, or counterproductive or seriously damaging at worst.

So, to give an example from my own work, I will mention a piece of work that I undertook in the early '70's, published in '71. It was informed by conventional wisdom guiding population research at that time, but did not benefit from any intelligence, any input, any sensitivity that the population I was studying could have contributed to the study. As there was no research of a sensitive nature done on Inuit at that time there was nowhere I could turn. I refer to the widespread belief, which constituted a demographic theory, that high fertility impacts negatively on the economic and health status of developing societies. That is a widespread belief in developmental, economic, and sociology-development studies.

Accepting, as I did, that fourth world societies in North America, the Inuit included, were, in developmental terms, not dissimilar to most third world developing societies, I justified my advocacy for extending national voluntary family planning services in the Northwest Territories on conventional demographic grounds as well as on grounds of improving maternal health, child care, the goal of achieving universal application of social welfare legislation in Canada and so on.

Now I still believe that these goals, the achievement of universal application of national programmes, the improvement of maternal health, child care and all those things, are important ones to promote. However, I now see that certain theoretical assumptions underlying my advocacy, namely that high fertility impacts negatively on developmental programmes, are highly questionable in the context of Inuit social relations. Important as economic development is in the North, it is not the bottom line, and it will not lead to improved well-being of the population, which should be the bottom line, if its attainment places undue strain on the social fabric of the population which has to make adjustments.

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So, to give an example from my own work, I will mention a piece of work that I undertook in the early '70's, published in '71. It was informed by conventional wisdom guiding population research at that time, but did not benefit from any intelligence, any input, any sensitivity that the population I was studying could have contributed to the study. As there was no research of a sensitive nature done on Inuit at that time there was nowhere I could turn. I refer to the widespread belief, which constituted a demographic theory, that high fertility impacts negatively on the economic and health status of developing societies. That is a widespread belief in developmental, economic, and sociology-development studies.

Accepting, as I did, that fourth world societies in North America, the Inuit included, were, in developmental terms, not dissimilar to most third world developing societies, I justified my advocacy for extending national voluntary family planning services in the Northwest Territories on conventional demographic grounds as well as on grounds of improving maternal health, child care, the goal of achieving universal application of social welfare legislation in Canada and so on.

Now I still believe that these goals, the achievement of universal application of national programmes, the improvement of maternal health, child care and all those things, are important ones to promote. However, I now see that certain theoretical assumptions underlying my advocacy, namely that high fertility impacts negatively on developmental programmes, are highly questionable in the context of Inuit social relations. Important as economic development is in the North, it is not the bottom line, and it will not lead to improved well-being of the population, which should be the bottom line, if its attainment places undue strain on the social fabric of the population which has to make adjustments.

Having accorded importance to the maintenance of the existing social fabric, it is appropriate to enquire about the adaptational means used by the particular society to effect such maintenance. Anthropologists had documented this exhaustively for Inuit society, wherein social alliances create networks of association, through a whole range of kinship and extra-kinship institutions that provide the structures and the functional arrangements for orderly social, political and economic interactions within the population.

So we know that people are the basis of creating and maintaining the bonds that hold the dynamic structure together and we know the especial importance of children in creating these bonds, particularly in a society which is undergoing change and undergoing geographic mobility - moving from place to place - and coalescing in large work centres and so on. The children are vital in establishing and re-establishing a sense of community within these aggregates of people. We must ask whether the overall adaptive capability of a society may become reduced in the face of large development. If it is, the whole developmental goal is compromised or placed at risk.

I have a particular reason for raising the question of the appropriateness of assumptions underlying the theory or theories implicit in our research plans. I have a strong suspicion that underlying the demographic concerns of the Science Advisory Board of the Northwest Territories is the intellectual belief that as the population of the Territories increases, the significance of economic options of harvesting renewable resources becomes diminished in operational terms. I have no quarrel with that line of questioning - I think we should ask those questions, but in so far as there is an intellectual basis for doing so and the scientific approach is being used, there will be some underpinning to the theory, about which I have reservations.

The reason is that the scientific point of view on this problem or perceived problem, relies implicitly on the notion of carrying capacity, with which a number of you are familiar I am sure. It is the idea that a given biomass of population requires a certain biomass of food species, that these reach equilibrium and that the equilibrium can be upset. In that case, the feeding population collapses because it's food supply is wiped out or upset in terms of the equilibrium. I don't think it is useful to say more about this now except to remind you of the inappropriateness of this deceptively useful term "carrying capacity", and its lack of utility as an analytical tool when dealing with human populations. I don't deny its utility for caribou, ungulate population, or any other animal populations that people study as ecologists. Since the time that geographer John Street seriously questioned its applicability to the human situation, which was way back in 1961, it has all but disappeared from informed scientific discussions of man-land relationships. It's only the biologists who are wandering into the field of human ecology who continue to apply it.

This reinforces once again, by the way, the emphasis I would urge on sensitive human resolution of the outstanding significant demographic problems rather than on a mechanical, disembodied, reductive approach. In so far as one duty of the scientist in today's complex and problem-ridden world is to help create an informed public opinion, thereby encouraging decision-makers to become equally informed, a student of northern populations must, I believe, stand back for a moment and survey the accomplishments of the last few years of frenzied data gathering, particularly as gathering more data is going to be more intrusive and questionable to the target populations who are subjected to questionnaires and interviews. Stand back, strengthen the resolve to utilize the existing data in the very best way to achieve a socially relevant output, and be prepared to enter into a continuing dialogue with several publics, so that the direction these labours take is sensitive to real and not merely fanciful issues.

First theme / 1er thème

Review of northern demographic research recently completed, underway or planned for the near future.

Etudes récentes et projets de recherche en démographie nordique

Chairperson / Présidente

Louise Normandeau
Département de démographie
Université de Montréal

First theme / 1er thème

Chairperson / Présidente

Louise Normandeau

La première section du thème qui sera abordée aujourd'hui touche principalement des études qui ont été faites, qui sont en cours ou qui sont projetées, en ce qui a trait à la démographie. Le programme du premier thème se poursuivra toute la journée et sera divisé en deux parties. La première consistera en un échange d'informations, si l'on peut dire, sur des études menées à l'Université de la Saskatchewan, au gouvernement du Yukon et à celui des Territoires du Nord-Ouest ainsi qu'au Ministère des Affaires indiennes et du Nord. Cet après-midi, on abordera des sujets beaucoup plus précis, tels les aspects de la géographie du peuplement inuit dans la zone frontière Québec/Territoires du Nord-Ouest ainsi que les migrations et le recensement des Métis des Territoires du Nord-Ouest.

Je vais donc céder la parole à M. Robert Bone de l'Institute for Northern Studies and Research de l'Université de la Saskatchewan, qui nous parlera des recherches qui ont été menées jusqu'à maintenant à son Centre. Monsieur Bone nous présentera également un projet de recherche conjoint avec le Département de démographie de l'Université de Montréal et l'Institute for Northern Studies and Research de l'Université de la Saskatchewan, projet qui porte sur l'étude de la démographie au nord de la Saskatchewan, le tout en comparaison avec les populations des Territoires du Nord-Ouest et du Yukon.

"A joint program of research by the Institute for Northern Studies and Research and the Département de démographie, Université de Montréal"

Robert Bone

Director

Institute for Northern Studies and Research
University of Saskatchewan, Saskatoon
Saskatchewan

Following the first workshop, it was apparent to Jacques Légaré and myself that universities were having problems grappling with some of the large issues in northern demography. There were two major issues that concerned us. The first was to get a handle on demographic change, those terrible mechanical numbers. We knew that changes were going on that were deeply rooted in the social makeup of northern Canada, and in the pressure of southern Canadian concerns upon the North, and to some degree, we had a conflict at hand.

We decided to combine forces principally because each of us felt too small to be able to do justice to what we might call a grand approach to northern studies of demography. Why should we take a grand approach? The answer is that the micro-studies in settlements that involved questionnaires and data gathering and analysis are fine but may be atypical. At the political level, the problem is sometimes with the data and sometimes with the interpretation, so that between the micro-level and the macro-level there were different things being said. For instance, many times the normal thing with community studies is that the data is immediate and local, and at the territorial, or political level, you are dependent on secondary sources such as the census. In other words, data on the dynamics of social change in the North was "out of step"; there were two drummers and people were trying to make sense out of the noise, because each drummer was beating a different tune.

The proposal includes all the basic questions a good demographer should ask and indeed, what Jacques and I have attempted in our grand scheme, is to have a long-term study in which there are several phases. Phase I runs for approximately a year and a half and would be an attempt to elaborate on work that we had already begun. The Département de démographie would concentrate on Arctic Quebec where they had done some very important work stemming from the concerns of the Inuit people and changes consequent upon the whole James Bay incident.

In the case of the University of Saskatchewan, we had undertaken various kinds of research in northern Saskatchewan where you have a population of about 25,000, 80% of whom are native people, about equally divided between Métis and Indian. We will concentrate on this group as a

target population. We have spent a number of years looking at health-care records as a means of having an accurate and up-to-date impression, a statistical impression of social change. The population data base is there, although in some cases, incomplete. We might have to look at changes in family size or in community size. We will concentrate on analysis using our own methods which are already established, and then come together and make comparisons. One of the questions that we are interested in is the natural rate of increase which gets into what you might call the basic demographic questions of vital statistics: birth rate, death rate, and the differences, in our case, between the various population groups.

We want to look at the white population, Métis population and the treaty Indian population as well as the total population. We want to look at differences between communities, to see if there are communities of similar size but which, because of social and economic characteristics, have different demographic attributes. Those attributes would include either in-migration or out-migration.

On the subject of migration, there is a swelling number of people from northern Saskatchewan who are moving south to the main cities and even to Edmonton. We can see it all around us and politicians say, "Obviously we have more Indian and Métis people in our city because everybody can see that, I wonder where they came from?" The assumption has been that they are coming from the area immediately around the cities of Regina, Saskatoon, Prince Albert, North Battleford, and so on. We believe that it is partly true, but we think that there is more than a trickle coming from northern Saskatchewan. Now when you get into migration you get into a very interesting thing - that is, is it permanent or is it some kind of short-term or long-term visit?

Of course this gets right into the topic that Dr. Freeman mentioned, the ties that people have. It's apparent that the initial surge of population from northern Saskatchewan in the early '70's, was directed to communities where there already was a contact. In those places there was a process where, knowing that somebody was there and able to more or less do the downfield blocking needed in moving to a new city and making more contacts there, more people came to that city. In other words we would hypothesize that in the initial moves in the early '70's, one could see the numbers of people moving to communities would not be related to the size of the community but rather to their social contacts. By now, the social contacts are so widespread that we believe that in the 1980s, the flow of migration will be more normal and related to the size of the community.

The concentration of population is a world-wide phenomenon that is very active in the fourth world, and in northern Canada as part of that fourth world. The concentration of populations in settlements is one of the most important demographic and social processes that has occurred in the 1970s and that will occur in the 1980s, and the implications will be significant upon culture, upon economic development, upon human well-being, - whether you're talking about sewer and water or you're talking about cultural institutions or whatever.

In one sense the coming together of people provides an opportunity and a challenge, I think, to the national society or the dominant society to make a better place in our world for the small people of the Canadian North.

The proposal that the two universities put together has met with a positive response from funding sources but the final response, which would give us the green light to go ahead, has not occurred yet. We are hoping that when the present Conservative Government sorts out its research priorities that they will favourably look upon this effort by the Université de Montréal and the University of Saskatchewan, to make a contribution to scientific knowledge in the area of demography.

One of the things that I found interesting in Dr. Freeman's speech was the idea of the natural rate of growth and I think most of us are aware that at the time of the first workshop several years ago, it was apparent that the birth rate for many people in the fourth world was in decline. Certainly in Greenland that was the case and the impact upon population was quite apparent. We have seen the birth rate in northern Canada and certainly in northern Saskatchewan decline since the mid-1970s. If the decline continues, and if it is as widespread as we suspect it is, the implications for northern people will be profound. Coupled with that, the pace of economic development in northern Canada, accelerated by the energy crisis, can only lead to massive northern inmigration, some of which will be permanent. As a result the balance of population in northern Canada can be expected to change radically in the 1980s. I believe that the proposal that Professor Légaré and I have put forward and proposals from other universities are very important in keeping our society on top of the situation as changes occur in Northern Canada, so that sensible and understanding public policies be put in place now rather than later.

So I am describing something that is very broad and we aren't trying to be specific. We are going to have a broad, grand study which will be shared by the institutions. There will be some specialization as we go along, and trading of information. We have every hope of involving others, and others would certainly include the people who live in the North. The object is to be able to work with people including government people, native leaders, anybody who is interested in what we are doing, because as scientists I think we're not so much scientists as sharers, trying to find something out and share it with somebody. If we're not trying to share then there is no point in being a scientist because the whole idea is to get the message out to where people can make use of it.

"Demographic data development activities of the Yukon Territorial Government"

Doug Munroe

Chief

Economic Research and Planning Unit
Government of Yukon, Whitehorse.
Yukon Territory

I guess I would like to start with a public relations job for the territorial government and me in particular, and indicate where I fit into the organization. As some of you know, there has been a number of changes in the Yukon government over the last six months or so, and the territorial government is moving rapidly toward a provincial type of government. At the present time the business of government is being run by elected members for the first time in history and there has been a number of name changes associated with that. What used to be known as the Executive Committee is now the Executive Council and people in charge of departments who used to be called Members are now called Ministers (see Figure 1). I fit in over here in the Economic Research and Planning Unit, within the Department of Tourism and Economic Development. Some of the relationships that I have are with Yukon businesses, various interest groups and the territorial government department. Outside of that we do a lot of work with Statistics Canada, D.I.A.N.D., of course, Energy, Mines & Resources and D.R.E.E.

In the territorial governments, they have a tendency to pile everything in one basket, not like in the federal government where everything is nicely laid out and everyone has their specialty. I have ended up with quite an array of activities. We have a statistics function which involves the collection and dissemination of data, and also involves policy (see Figure 2).

Some of you may be interested in the fact that this fall we tried to have a statistics ordinance passed by the territorial government, an ordinance which would provide powers for our agencies or those of Statistics Canada. The government didn't do a very good job on that particular piece of legislation and it was allowed to die on the order paper. One of the interesting issues was the response to compulsory parts of the ordinance; people objected to that quite strenuously. Unfortunately the government did not have a very good rebuttal and as a result, the ordinance has been shelved indefinitely. We are also involved in research of various types: feasibility studies, various things related to railroads, gambling, and decentralization of government.

FIGURE 1

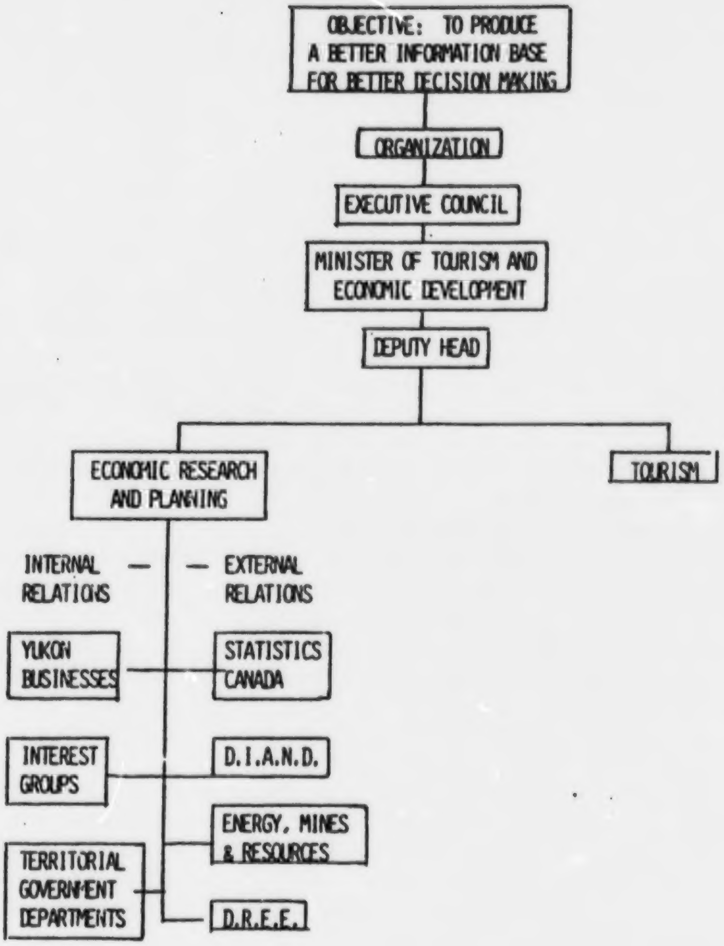
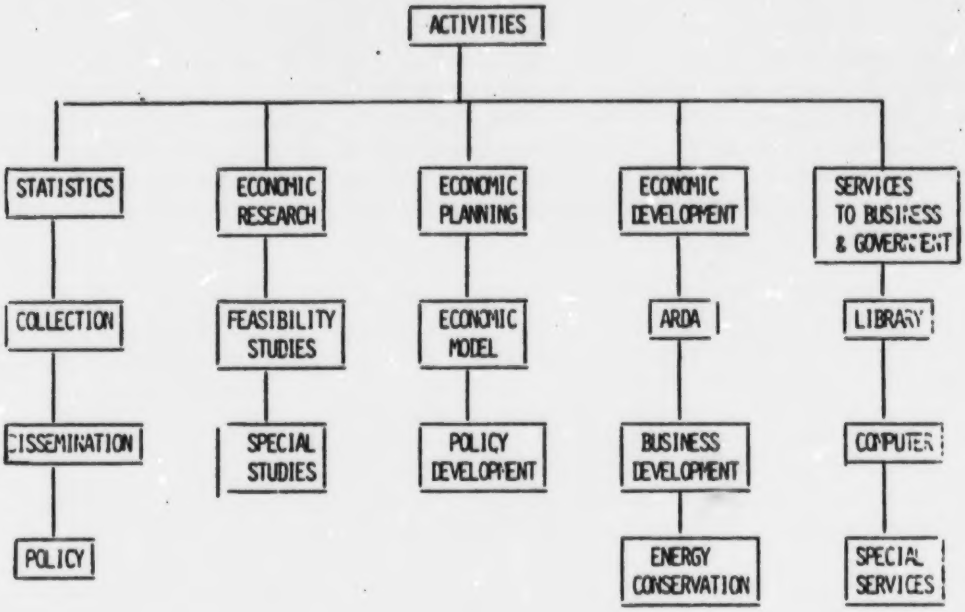

OBJECTIVE: TO PRODUCE A BETTER INFORMATION BASE FOR BETTER DECISION MAKING
ORGANIZATION
EXECUTIVE COUNCIL
MINISTER OF TOURISM AND ECONOMIC DEVELOPMENT
DEPUTY HEAD
ECONOMIC RESEARCH AND PLANNING
TOURISM
INTERNAL RELATIONS
EXTERNAL RELATIONS
YUKON BUSINESSES
STATISTICS CANADA
INTEREST GROUPS
D.I.A.N.D.
ENERGY, MINES & RESOURCES
TERRITORIAL GOVERNMENT DEPARTMENTS
D.R.E.E.

FIGURE 2


ACTIVITIES
STATISTICS
ECONOMIC RESEARCH
ECONOMIC PLANNING
ECONOMIC DEVELOPMENT
SERVICES TO BUSINESS & GOVERNMENT
COLLECTION
FEASIBILITY STUDIES
ECONOMIC MODEL
ARDA
LIBRARY
DISSEMINATION
SPECIAL STUDIES
POLICY DEVELOPMENT
BUSINESS DEVELOPMENT
COMPUTER
POLICY
ENERGY CONSERVATION
SPECIAL SERVICES

We have an economic planning function which involves the use of an economic model which some of you may be familiar with. It was developed for us by Professor Stabler of Saskatchewan about a year ago. We have used that to make some long-term projections of population growth in the Yukon based on various scenarios of economic development. It's a very useful tool and I think it may become much more useful in future. The development of the model, incidentally, was a result of a paper delivered at a workshop sponsored by the Northern Population Research Committee which was held a couple of years ago in Whitehorse. As a result we decided to get into economic modeling.

Our unit is also involved in economic development. We look after special art programmes in the territory. We have a business incentive programme for urban development and an energy conservation programme in which we cooperate with the Department of Energy, Mines and Resources. We provide centralized library services for government, not in the sense of a public library but rather a research library. We have a computer facility and we are involved in special services related to departmental requests. For example, at the moment we are developing some studies for the Department of Justice, and for Health and Welfare.

Two years ago we made a commitment to develop an information base to help our politicians make better decisions. Most of this data is related to economic statistics as opposed to social statistics or demographic statistics (See Figure 3). We have developed a price survey over the last three years which relates prices in Whitehorse and various communities in the Yukon to points like Edmonton and Vancouver. You may be interested to know that the cost of living in Whitehorse is around 25% higher than it is in Edmonton and about 20% higher than in Vancouver. For a little over two years we have conducted a rent survey on a quarterly basis and we have also done a real estate transaction survey of housing, commercial and industrial, prices, number of sales and so on.

About a year or a year and a half ago, because of the Alaska Highway gas pipeline inquiry and other related developments in the Territory, it seemed necessary to get a basis to see what the labour force was doing. We had been trying for several years to initiate a labour force survey in the Yukon, with Statistics Canada and we have run into bureaucratic run-around and every kind of brick wall you can imagine. It always comes down to the fact that there's no money or no time or whatever. We felt it was necessary to develop statistics and we couldn't wait around any longer for Statistics Canada to get their act in place, so we developed a methodology ourselves. It's fairly simple but it does the job. Basically we have developed the same series of statistics that were published by Statistics Canada, only without doing a labour force survey. So this is a model with a mathematical formula not dependent on any kind of survey work. We have taken estimates from various other parts of the country, done some internal surveying ourselves, used some administrative records when they were available and came up with the data that we needed (Figure 4).

FIGURE 3

DATA COLLECTION AND DISSEMINATION

MAJOR PROJECTS

1) YUKON PRICE SURVEY
(JUNE, 1976)

2) YUKON RENT SURVEY
(DECEMBER, 1977)

3) YUKON REAL ESTATE SURVEY
(JANUARY, 1978)

4) YUKON ECONOMIC REVIEW
(DECEMBER, 1978)

5) YUKON LABOUR STATISTICS
(MARCH, 1979)

FIGURE 4

LABOUR FORCE STATISTICS METHODOLOGY

-STANDARD METHODOLOGY BUT DOES NOT INVOLVE A LABOUR FORCE SURVEY

DATA	SOURCE
TOTAL POPULATION	YUKON HEALTH CARE RECORDS ADJUSTED BY 1976 CENSUS
POPULATION 15+	YUKON HEALTH CARE RECORDS ADJUSTED BY 1976 CENSUS
PARTICIPATION RATES	STATISTICS CANADA - BASED ON REGIONS 98 & 99 OF NORTHERN B.C.
TOTAL PERMANENT EMPLOYMENT	WORKER'S COMPENSATION YUKON HEALTH CARE RECORDS & YUKON EMPLOYMENT SURVEY
TOTAL PART TIME EMPLOYMENT	STATISTICS CANADA - BASED ON REGIONS 98 & 99 OF NORTHERN B.C.
UNEMPLOYED	LABOUR FORCE MINUS TOTAL EMPLOYMENT

We've had some problems with this data: first of all our total population base is really from the health care records. We have adjusted the population by the 1976 census which is essentially the age breakdown. The reason we've used the health care records is that they are a monthly data base of population by age and sex in the Yukon. It is the only real data available, even though not ideal, and is better than using the 1976 census because we can see the number and flow of the population in the Yukon which is well established. Using anything four or five years old is meaningless. So we've used the health care records and we will be soon initiating a study to help correct some of the deficiencies in that system.

Another problem we have is establishing an estimate of participation rate. Because we're not doing a survey we had to use a best estimate of that. Regions 98 and 99 in Northern B.C. are the areas that cover the northern part of the province. We felt those particular areas were fairly representative of what the Yukon would be in areas dominated by mineral activity and tourism, and have roughly the same type of breakdown in population between native and non-native. So we've used the published participation rates for those areas in arriving at our calculations of labour force. Permanent employment is calculated on the basis of a survey that we do of Yukon companies to cover almost 100% of the companies operating in the Yukon. To estimate part time employment, we used a figure from Northern B.C. The number of unemployed then drops out as being the difference between the labour force and employment. It is a fairly mechanical system subject to a number of problems but we have now used it for over a year and it has shown some interesting results.

The labour force, employed and unemployed, over the past fifteen months is shown in Figure 5. Note that there is a rise in the graph, and then a subsequent decline. We had a closure of a major mine which employed around 350 people in June of 1978 and it took six months for those people and those impacts to work themselves through the economy and so there is a broken labour force until about January 1979, which has been declining since then. In addition to that you can see that through the middle of 1978 we had a fairly strong performance in our tourism industry and we also had a hiatus caused by pipeline expectation which resulted in a growth in the labour force. It's obvious from this graph and it will be more obvious in the next that the labour force is fairly seasonal. That is expected but it's rather remarkable when you get into the calculation of unemployment rate which looks something like Figure 6. The unemployment rate varies anywhere from 25% during the winter to somewhere close to 5 or 6% in the summer.

What has happened in the Yukon over the last six months or eight months is rather interesting from an economic point of view. Generally speaking, when the unemployment rate is reduced, that is positive, politicians tend to get excited about it. In our case it was quite the opposite because the unemployment rate in June of 1979, at just a little over 5%,

was caused not by an increase in employment but by a decrease in the labour force and to me, that meant something unique to the Yukon. When economic activity begins to decline, people, rather than staving. leave the Territory and subsequently you get a balancing out of people coming in and out depending on the economic activity level.

The decline in the economic activity over the past summer is fairly obvious if you live in Whitehorse. Retail trade, for example, has actually declined in the last year in absolute terms, and our tourism sector was down significantly this summer because of energy problems and so on. With the decline in the economic activity during this part of the year, people were leaving the Territory and the unemployment rate was declining. As a result, I made a number of conclusions (Figure 7). The first one is fairly obvious: the labour force in the Yukon is highly seasonal. You not only get people moving in and out on a permanent basis you also have a temporary basis, primarily during the summer, during the tourist season. The labour force in the Yukon is extremely sensitive to economic activity and there has been quite a remarkable decrease in activity over the past eight months resulting in a net outmigration of people. Just as a point of interest, the moving companies in Whitehorse estimate that for every ten families who are moving out there are seven moving in. This data turned out to be a fairly useful tool to indicate what is happening in the Yukon's economy.

Prior to this development of the data I don't think we would have been in a position to say that the economy was in fact declining and our abilities in that respect have a direct impact on government policy, of course. In the Yukon we are limited in what we can do with the economy. However, the government intends to embark upon a new business incentive program that people want, so this kind of data does have a fair amount of impact on policy decisions. I have brought several copies of the paper which describes the methodology of this data in much more detail than I have done here and if anyone wants a copy, they are available. (See following pages).

FIGURE 5

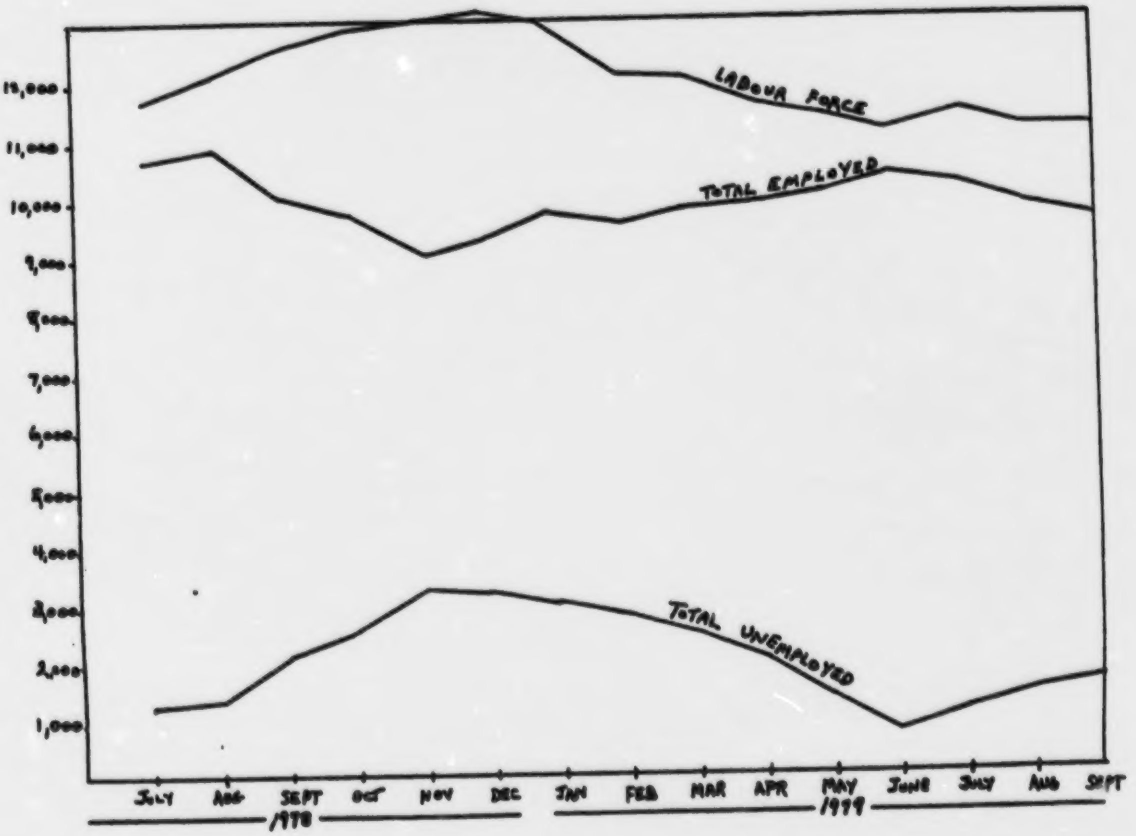

12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
LABOUR FORCE
TOTAL EMPLOYED
TOTAL UNEMPLOYED
JULY
AUG
SEPT
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEPT
1978
1979

FIGURE 6

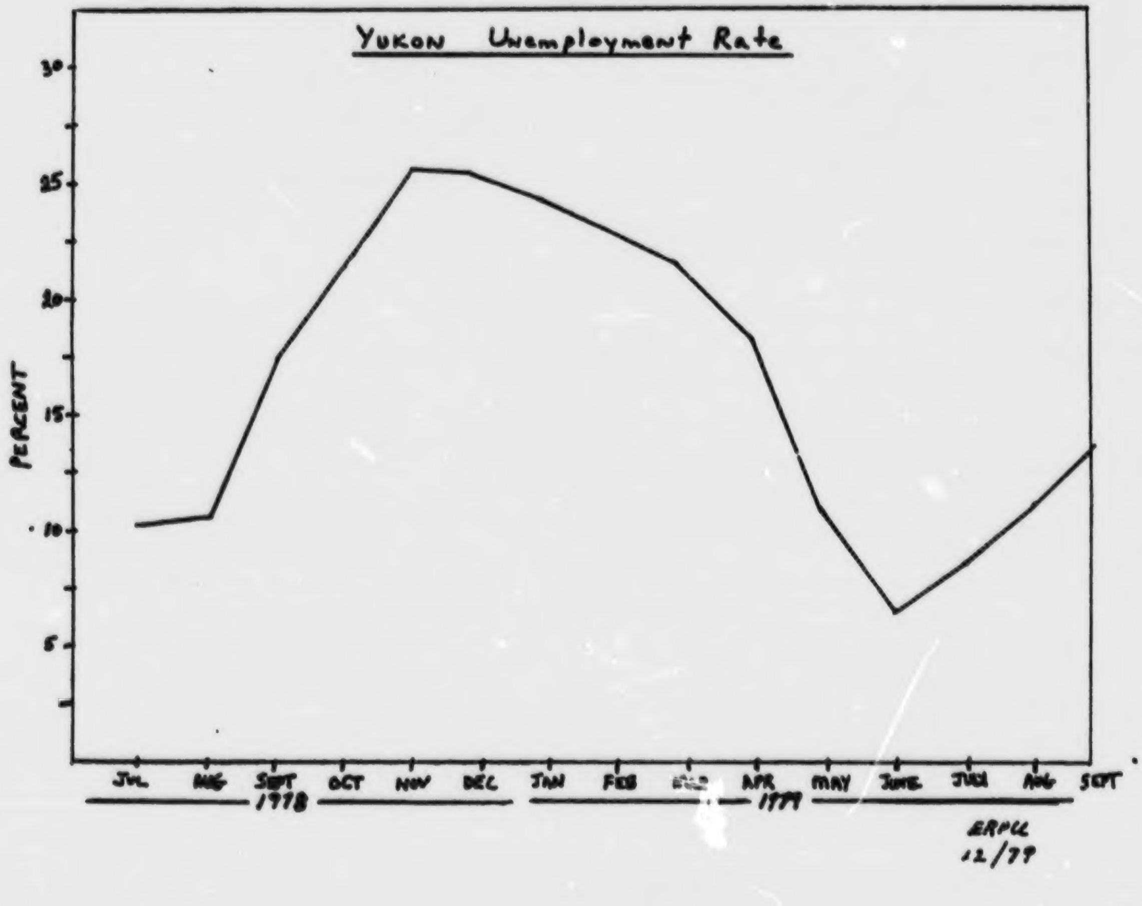

YUKON Unemployment Rate
30
25
20
15
10
5
PERCENT
JUL
AUG
SEPT
OCT
NOV
DEC
JAN
FEB
APR
MAY
JUNE
JULY
AUG
SEPT
1978
1979
ERPCC
12/79

FIGURE 7

CONCLUSIONS

1) Yukon labour force is highly seasonal.

2) The Yukon labour force is extremely sensitive to changes in economic activity.

3) The Yukon labour force provides an excellent coincident indicator of economic activity in Yukon.

4) During economic recessions, Yukon tends to balance itself by a reduction in population and labour force, rather than by an increase in the unemployed.

ECONOMIC RESEARCH AND PLANNING UNIT
GOVERNMENT OF YUKON

YUKON Economic review

THIRD QUARTER - 1979

YUKON AND THE CPI.....WHAT DOES IT MEAN?

In September, E.R.P.U. released the results of the latest Price Survey which is published six times a year. The methodology used for this survey is similar to that of the nationally used C.P.I.

Unfortunately, the C.P.I. or, Consumer Price Index, relates only to the population group composed of all families and unattached individuals living in private households in urban centres which, according to the 1971 Census, had populations of 30,000 or more. In 1971, Yukon's largest urban centre, Whitehorse, had a population of 11,277. Consequently, there is no C.P.I. published for Yukon. However, there is evidence to suggest that even quite marked differences in spending patterns will not result in significantly different C.P.I. movements when rates of price change of various items are broadly similar or when differing price trends offset one another. Consequently, in the absence of a C.P.I. for Yukon, we use C.P.I. expenditure patterns for Edmonton to calculate the Yukon Price Survey.

Formally defined, the Consumer Price Index measures the percentage change in the cost of purchasing a constant group or basket of goods and services representative of the purchases made by a particular population group in a specified time period.

The price of the C.P.I. basket in the base period (currently 1971) is assigned a value of 100 and the price at other points in time is expressed as a percentage of the price in the base period. For example, if the price of the basket had increased 35% since the base year, the index would read 135.0 and similarly if the price had fallen by 5.0 the index would stand at 95.0.

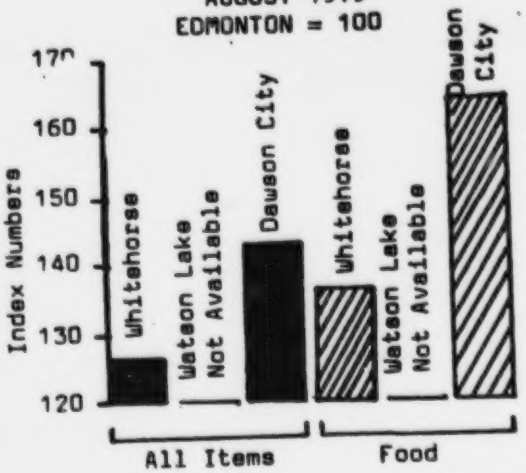
It is important, however, to note that price indexes measure price MOVEMENTS rather than actual price LEVELS. If the index for milk is 120 at a given point in time, when the corresponding index for butter is 110, this does not mean that milk is more expensive than butter. It means that the price of milk has increased twice as much as that of butter since the base period.

Although the C.P.I. is loosely termed a "cost of living" index, strictly speaking this is a misnomer, since the index is based on a constant basket of goods. No one has yet been able to produce an index, which, among other things, would immediately reflect the various substitutions that consumers tend to make in order to maintain their standard of living in the face of changing market conditions.

Consequently the Yukon Price Survey cannot be considered a cost of living index for Yukon, but a measure of price movement in different communities at a given point in time.

Research notes

* SPATIAL PRICE COMPARISON
AUGUST 1979
EDMONTON = 100



* A spatial index measures the differential in prices among different communities at a given point in time.

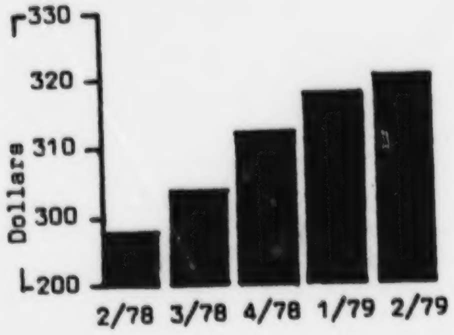
** A temporal index measures absolute price changes within a particular community over time periods.

** TEMPORAL PRICE COMPARISON
APPROX. % CHANGE – AUG./78 – AUG./79

	All Items	Food
Whitehorse	10.0	14.1
Dawson City	7.2	16.4
Faro	12.4	11.9
Mayo	10.0	13.3
Destruction Bay	9.5	12.0
Haines Junction	10.3	13.1
Teslin	11.0	12.6
Carcross	8.1	10.9
Edmonton	8.6	9.4
Vancouver	7.7	10.0

QUARTERLY
AVERAGE RENTS – ALL SUITES

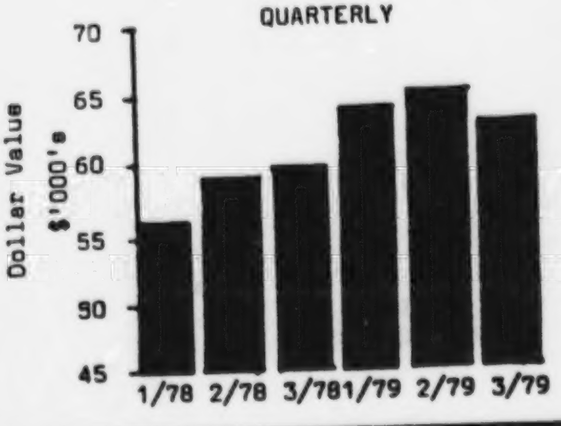
WHITEHORSE



RESIDENTIAL HOUSING
AVERAGE PRICE

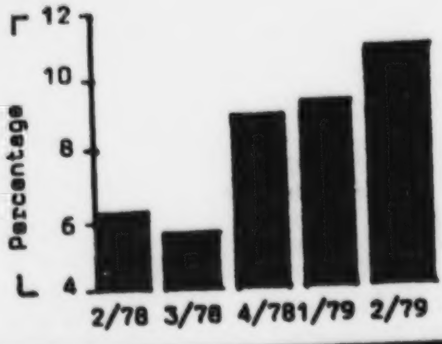
WHITEHORSE

QUARTERLY



QUARTERLY
AVERAGE VACANCY RATE
WHITEHORSE

ALL SUITES



Yukon statistics

SOCIAL STATISTICS

POPULATION BY COMMUNITY

	SEPT 1978	SEPT 1979	% CHANGE
Dawson City	1,100	1,153	4.8
Elsa	657	590	(10.2)
Faro	1,641	1,660	1.2
Haines Junction	400	444	11.0
Mayo	494	471	(4.6)
Teslin	356	375	5.3
Watson Lake	1,386	1,407	1.5
Whitehorse	15,994	16,476	3.0
Other	2,086	1,913	(8.3)
Total	24,114	24,489	1.6

Source: Yukon Health Care Records. % in parenthesis denotes decrease.

LABOUR STATISTICS

	SEPT 1978	SEPT 1979	% CHANGE
Labour Force	12,219	11,088	(9.3)
Employment	10,079	9,752	(3.2)
Unemployment	2,140	1,336	(37.6)
Unemployment Rate	17.5	12.1	(30.9)
# Companies Operating	1,029	1,037	0.8

ECONOMIC INDICATORS - MONTHLY

	UNIT	JUN/78	YR.TO DATE	JUN/79	YR.TO DATE	% CHANGE
Retail Trade	$000	5390	23587	4656	23332	(1.1)
New Car Sales	$000	1919	9242	1686	8086	(12.5)
Bldg. Perm(Whse)	$000	2081	13854	1965	8341	(39.8)
Av. Wkly. Earn.	$	366.71	359.38	383.86	372.75	3.7
Fuel Sales	Gals 000	3562	22676	3269	19416	(14.4)
New Vehicles	Registr.	1336	16972	4707	21789	28.3
Elect. Generated	M.W.H.	28292	194544	25687	184386	(5.2)

ECONOMIC INDICATORS - ANNUAL

	UNIT	1977	1978	% CHANGE
Retail Trade Total	$000	62795	70060	11.6
New Car Sales	$000	14608	17402	19.1
Minerals - Gold	$000	4656	7354	58.0
- Silver	$000	20155	29405	45.9
- Lead	$000	47628	65466	37.4
- Zinc	$000	80562	75481	(6.3)
- Copper	$000	8954	18066	101.8
- Asbestos	$000	47494	32404	(31.8)
Tourism	$000	29074	33000	13.5
Fuel	Gals 000	42330	45161	6.7
Bldg.Permits	$000	15759	32966	52.1
Housing Starts	units	235	248	5.5
Elect. Generated	M.W.H.	338703	351190	3.7

et cetera..

LIBRARY ACQUISITIONS

- "Benefit - Cost Analysis of Winter Operation of the Dempster Highway" prepared for the Dempster Highway Management Committee by Quadra Economic Consultants Ltd. and Trimac Consulting Services Ltd. 1979.
- "Energy Update 1978" Department of Energy, Mines and Resources, Ottawa, 1978.
- "Heating with Wood Safely" CMHC, 1978.
- "Mining in Canada, Facts and Figures, 1979" The Mining Associates of Canada, Ottawa, 1979.
- "Summary Report on Yukon Mineral Activity, September 30, 1979" Archer Cathro and Associates Ltd. 1979.
- "1979 Index to Mining Assessment Reports" Northern Affairs Program, D.I.A.N.D. Ottawa, 1979.
- "Current Research, Part B" Geological Survey of Canada, 1979.
- "Perinatal Mortality 1973-1977" Department of Health and Social Services, Juneau, Alaska. 1978.
- "Prince Edward Island Population Dynamics 1981-1996" William J. Coffey and Patricia M. Smith, for P.E.I. Department of Development. 1978.
- "Economic Overview - Review of Selected Trends in the Prince Edward Island Economy 1971-1977" P.E.I. Department of Development.

For further information regarding this publication contact:

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"A review of the Data Management Division's recent activities and plans for future"

Del Stewart

Analyst Officer

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Department of Indian and Northern Affairs
Ottawa, Ontario

In preparing this talk, I thought it would be worthwhile to go back a few years to look at some of the major efforts carried out by the federal government and some of the shortcomings resulting from mistakes we had made. There are seven national objectives for northern Canada as approved by the federal government in 1971. The purpose of the objectives was to provide for "a policy framework for the formulation, co-ordination and implementation of all federal and territorial programs concerned with northern Canada..." and to provide "a common basis for federal and territorial governments to plan and implement their northern programs."

The following is a brief description of these objectives that we as a Department, as a federal government, are concerned with:

"1. Quality of Life - To provide for a higher standard of living, quality of life, and equality of opportunity for northern residents by methods which are compatible with their own preferences and aspirations.

2. Economic Growth - To encourage viable economic development within the regions of the northern territories so as to realize their potential contribution to the national economy and the material well being of Canadians.

3. Sovereignty and Security - To maintain Canadian sovereignty and security in the North.

4. Protection of Environment - To maintain and enhance the northern environment with due consideration to economic and social development.

5. Evolution of Government - To further the evolution of self-government in the northern territories.

6. Social and Cultural Development - To realize the potential contribution of the northern territories to the social and cultural development of Canada.

7. Leisure and Recreation - To develop fully the leisure and recreational opportunities in the northern territories."

When you look at these objectives you see what research people within the federal government are faced with. It's tremendous. We sympathize with researchers on the outside, but internally we face problems in terms of funding, fiscal relations with the territorial governments and specific programmes. More research is necessary. Our own errors make that evident. I hope to suggest some areas where "outside" researchers and federal territorial people can get together to try and find some sort of common ground.

Within this broad policy framework we at Data Management Division have a key supportive role to perform in the Department of Indian and Northern Affairs' endeavours to advance the social, cultural, political and economic development of Canada's two northern territories. The Division is responsible for developing, in conjunction with the territorial governments and Statistics Canada, a comprehensive system of data banks necessary to produce regular and consistent socio-economic and demographic information, and for providing statistical analysis, both qualitative and quantitative, for northern economic planning.

The usefulness of our data banks has been proven on numerous occasions through their ability to meet the data requirements of a diverse field of users including:

i) management, planning and research groups of DIAND;

ii) other federal departments and agencies;

iii) the territorial governments;

iv) industrial, academic and private groups.

I do not mean to imply that our data banks are even close to meeting our needs or expectations, as will be evident from comments that I am about to make. My discussion is divided into three parts.

First, I will discuss some of our activities over the past few years, including problems and shortcomings, as they relate to the collection and compilation of socio-economic and demographic statistics. Secondly, I will talk about our present endeavours at Data Management Division in terms of re-organizing or, it is probably more appropriate to say, organizing our data banks. Lastly, I will present some of our plans for the future, indicating how we at Data Management Division could, in co-operation with the territorial governments, other federal departments and researchers, do our small part in advancing the field of demographic and socio-economic statistics.

I

The collection of demographic and socio-economic statistics on the territories has itself become a field of study in the last decade. However, there are no systems, to my knowledge, that serve the needs of all concerned. What I find most frustrating is that we all complain bitterly that present information systems do not supply us with accurate, consistent and timely data, yet very little in the way of alternatives has emerged.

Northern Affairs Program of DIAND conducted manpower surveys in the N.W.T. and Yukon between the years 1969 and 1971. These surveys yielded a great deal of information, forming a broad yet detailed spectrum of demographic, social and economic statistics right down to community levels of aggregation. Large investments of time, manpower and dollars went into these surveys. The information was compiled and entered onto EDP record facilities with computer software programs written to permit many varieties of cross-tabulations on the data variables. All of the computer printouts produced from the manpower surveys presently reside in our Division and, piled up, would make seven to eight feet of statistical information. Even the concepts of "noncoverage" and "nonresponse" were carefully studied, documented and included in the information records.

There was one major drawback! Although the surveys were designed with every intention to repeat them, they never were repeated. The result is history - data collection, via these vehicles, ceased and so did any hope of developing historically consistent data banks.

In 1971 Statistics Canada launched another of its decennial censuses. Our Division makes use of all demographic and socio-economic data from the census providing they are disaggregated sufficiently to treat each of the Yukon and Northwest Territories separately. Since most of the information requirements of the Northern Affairs Program pertain to the North, and since much of the statistical data is not available in published form specifically identifying each territory, much of the census information used by the Program must be obtained from Statistics Canada via special computer tabulation requests. There have been serious shortcomings experienced with respect to the census material on the North including:

i) the long period of time between censuses; is that Statistics Canada's fault? Perhaps we should be pushing harder;

ii) the inability of the census to provide data series on the Yukon and Northwest Territories sufficiently disaggregated for the needs of the Division;

iii) the problem of random rounding, particularly inside enumeration areas, which has a magnified effect in the North;

iv) undercountihg, which has also been noticed in other information sources;

v) the inability to produce data broken down by ethnicity.

Only with the last census of 1971 has it been made possible to obtain most available census data disaggregated to the individual territory level.

In southern Canada, information requirements during intracensal time periods are pursued by Statistics Canada and/or the various provincial statistics bureaus which conduct surveys in certain subject areas. In addition population estimates are made, and the monthly labour force survey continues to operate regularly. Supplements to these programmes are pursued by those departments such as Manpower and Immigration. Such activities do not occur regularly, if at all, in the North. It is therefore necessary to devise a number of ad hoc approaches for the acquisition of any social data pertaining to the demographic and employment fields, as well as to many other areas, e.g. price indexes, cost of living, family expenditure surveys, etc.

One last problem I would like to mention with respect to data available from Statistics Canada is that the information collection vehicles are usually not applicable to the northern situation since they are geared towards largely urbanized southern conditions. As a result, much information is lost in the North due to the inability to apply definitions, that are relevant to southern Canada. Is this Statistics Canada's problem? We have problems too. DIAND has made mistakes. Everybody has.

In 1974 an information system called TERIS (Territorial Employment Record Information System) was developed with primary responsibility residing with the Northwest Territories Department of Local Government's Employment Division. Advice and support were provided from our Northern Affairs Program.

The aim of TERIS was to design and implement an information system which would monitor the potential labour force for the whole of the N.W.T. and provide,

a) statistical data for manpower planning and research purposes;

b) a means for identifying individuals for potential jobs or training programs.

From its inception, the importance of a system such as TERIS could not be stressed enough. There is still a pressing need, if not an obligation, for the federal and territorial governments to maintain and update, on a continuing basis, a labour force inventory file which is both comprehensive and accurate. Nevertheless TERIS has floundered in the same manner as many other information system efforts. Unless adequate planning is done

with respect to appropriate updating mechanisms, manpower requirements, funding arrangements, and formal working relationships defined, efforts such as the DIAND Manpower Surveys and TERIS will inevitably end in failure.

II

Having dwelt long enough on problems encountered in the past, (not to mention numerous efforts in connection with obtaining pricing information on the northern territories in the 70's) I will now discuss some of our more recent activities at Data Management Division as they relate to the collection of socio-economic and demographic statistics.

One major thrust within the Division has been the organization of a "reports storage" centre. The centre has now been designed, the classification system completed and all relevant documents physically entered. By "relevant" is implied all reports, publications, etc. which pertain to the Northwest Territories and Yukon. The centre is open to anyone wishing to use the facilities although distribution limitations do exist.

A catalogue is nearing completion and will be available for distribution in the near future. It should be mentioned that the centre was designed with future expansion given due consideration since we are continually adding pertinent reports to it.

Another major, continuing effort in the Division is the collection and compilation of information and data on the economic accounts of the Yukon and Northwest Territories. The entire study is devoted to the development of a complete set of economic accounts on a sectoral basis for each territory. The accounts will provide information on the financial flows between and among the various sectors of the economy in the North for the period 1967-77.

There are a number of other ongoing efforts within the Division including the design, development and implementation of a computerized cash-flow mining model, implementation on our in-house computers of a marketing information system supplied by Dun and Bradstreet Canada Limited and supplying us with a massive amount of employment data by community. It is very confidential and coverage is certainly not complete. The development of oil and gas projection methodology for the N.W.T. and Yukon with computerization plans for the near future is another concern.

A project which we are pursuing in the Data Management Division involves the "Design, Development and Implementation of a Data Base System on all Socio-Economic and Demographic Components Pertaining to the Yukon Territory and Northwest Territories". It sounds big; it is big. I have left discussions on this effort to the end since it represents our major ongoing contribution to the field of demographic and socio-economic research for Canada's two northern territories.

When I joined Data Management Division two years ago it was quite evident that there is a real need to create a centralized data base which will contain complete data records of all pertinent studies, surveys and censuses. It was also recognized that information requests must be continually monitored in some sort of systematic manner to maintain an inventory of data requirements from all user sectors. The "Information Request Form" (see next page) is used for this monitoring process.

It takes time to develop data, it takes time to develop data banks. You just don't come up with an issue and say, "Well, let's go after it". You have to recognize it and then you have to keep monitoring it. Where does the information come from? How good is it? How reliable is it? What's the coverage? We designed this form two years ago. It's not comprehensive but it is open-ended. Major areas, about which many requests had come to the Division are identified. Other information asked over telephone, by letter, personal visit, is always documented. One of these forms has documented every request received by the Division in the last two years... Do we have it all? No! Can we supply it all? No! The real needs are being monitored. Over the past two years there have been hundreds of data requests received and a record of each one is represented by one of these forms. Periodically, these forms are reviewed by staff within the Division and information sources sought and data obtained to help fill gaps in our data banks.

The objectives of our data base system, easier said than met, are to provide:

a) accurate, comprehensive, historically consistent and current information and statistical data available on the Northwest Territories and Yukon Territory; and

b) a system for quick and efficient storage and retrieval.

I would like to reiterate the words "available on the Northwest Territories and Yukon Territory". Presently, the main thrust of our data base is not to assess the accuracy and consistency of the statistical information which comes from a wide range of sources. I believe it is the general consensus that the statistical information available on the North is usually:

i) outdated,

ii) of questionable accuracy,

iii) inconsistent between sources,

iv) incapable of providing adequate time series,

v) catalogued or compiled in a form which makes it difficult to adapt the information to specific research programs.

INFORMATION REQUEST FORM

DATA MANAGEMENT DIVISION

SUBJECT

Education	☐	Income	☐
Employment or Manpower	☐	Mineral or Petroleum Resources	☐
Health and Welfare	☐	Population	☐
Housing	☐	Prices or Indexes	☐
Hunting and Trapping	☐	Other (specify) ______	

BREAKOUT

Age	☐	Financial Data	☐
Ethnicity	☐	Other(specify) ______	
Marital Status	☐	______	
Sex	☐	______	
Communities or Settlements	☐	______	
Yukon	☐	______	
Northwest Territories	☐	______	

YEARS REQUESTED

Specify ______

REQUEST RECEIVED BY

Telephone... ☐ Letter... ☐ Personal Visit... ☐ Other(Specify) ______

CLIENT INFORMATION

Name: ______ Title: ______

Department or Agency: ______

Address: ______

Telephone No.: ___ ___ _ ___ Date: ______

In planning for the data base, five phases were identified for its development. Phase I involves the preparation of an inventory of all statistical information available within our own Division, other program areas of DIAND, and other federal agencies and departments, e.g. National Health and Welfare, Statistics Canada, Manpower and Immigration. We are using all information sources that focus on the North or pertain to the North, the N.W.T., the Yukon, in the form of special tabulations or whatever. We are digging them up; we are having them made up and brought in. In order to systematically inventorize all data an "Information/Data Inventory Form" was designed, a copy of which appears on the next page. Every data set, regardless of how large or small, is accompanied by one of these forms.

There is a wealth of information to be found in reports and publications produced by various sectors including government (federal and territorial), private groups, researchers, indigenous groups and academic institutions. The unfortunate part is that this information never sees the light of day since the data is never classified and entered into a centralized data base. In our report storage we have many publications, hundreds now, and the backs of them may be full of relevant data; sometimes it's data that has been collected first-hand by the researchers to carry out their project. They write the report, the report goes to people who are interested in the literature content, it's filed on a shelf somewhere and the data never sees the light of day unless somebody requests the publication title. Then you see in the appendix that Oh!, they have done some data research. We're bringing all that out because we're going to the back of every report we can find, classifying it and linking it to the publication that's sitting in our report storage. So, every piece of hard data that appears with one of these forms is linked by the relevant information, by originator, by the person who filed it, and as a source of data information. So I can take a package of data, and I could go to report storage and pull out the relevant document where the procedures and the limitations on their data are explained, and they could be linked that way.

For every piece of information we get, say, a computer tabulation from Statistics Canada, the data is accompanied by one of these forms. There is a place for a code at the top and every form has a unique code. It's a massive job, it's a thankless job, but I think it's got to be done. People have been crying for an adequate data base. We need to know if we can take different information sources with different objectives, fill in the years between Statistics Canada's census or some other ongoing effort that's not timely enough and make some sense out of it. Well that's what we're striving to find out, but it takes a long time and you have to keep updating your data base. We don't have enough staff, we just keep working at it as hard as we can. We need cooperation from the territorial governments and from other federal departments.

INFORMATION/DATA INVENTORY FORM

Code: ______
Page(s) ______

Identification of data (Phase 1 - Data Base System Design)

SUBJECT MATTER

Administration....... ☐	Forest.................... ☐	Mineral Resources.......... ☐
Agriculture.......... ☐	Health.................... ☐	Petroleum Resources........ ☐
Education............ ☐	Hunting & Trapping........ ☐	Population................. ☐
Finance.............. ☐	Lands & Water............. ☐	Roads, Bridges & Airports.. ☐
Fisheries............ ☐	Manpower.................. ☐	Social Assistance & Welfare . ☐
Housing .... ☐	Transportation .... ☐	Tourism.................... ☐

Other.... ☐ specify: ______

TITLE OF DATA/INFORMATION TABLE

______

BRIEF DESCRIPTION OF THE CONTENTS

______

INFORMATION/STATISTICS AVAILABILITY

Type: Actual.... ☐ Estimates.... ☐ Other... ☐ specify: ______

Variables: $..... ☐ No's... ☐ %... ☐ Other... ☐ specify ______

Cross Classifications... ______

Periodicity: Monthly.. ☐ Quarterly.. ☐ Semi Annual.. ☐ Annual... ☐ Biennual... ☐

Stat Can Census.. ☐ One-Time.. ☐ Year: Fiscal... ☐ Calendar ..... ☐

Status of Information: Top Secret.. ☐ Secret... ☐ Restricted.. ☐ Confidential.. ☐

Other... ☐

Geographical Availability: ______

Years available: ______

ORIGINATOR

______

COMPILED BY (if applicable)

______

SOURCE OF DATA/INFORMATION

Publication... Title ______

Other... specify ______

For the purpose of this workshop Table 1 is presented to simply give a flavour for the discrepant, but obviously sufficient amounts of information available on basic demographic variables. For convenience, data from other sources, including DIAND manpower surveys and other private reports have been omitted here. In actuality, some cells of this table can be filled with multiples of four or five accounts or basic information on population. Table 2 was developed from our working sheets to further emphasize the magnitude of multiple accounts and the many sources available. Once again, for the sake of clarity, all information cells have not been filled with all of the data that is being discovered. For example from 1951, I have found nearly 20 sources of information, including private researchers.

Phase II of the data base development involves the physical identification and classification of all information inventorized in Phase I. Of course this phase can be pursued parallel to Phase I, at least at the global level of classification. The demographic area is presently being done in this manner. An obvious requirement at this stage is suitable storage and retrieval facilities. This need was considered in the project plans and we recently acquired the necessary facilities.

The third phase of the project is the key to the usefulness of the system. Suitable tabular formats will be designed for the compilation and presentation of the information. This will permit the retention of "raw data" in a manner which will facilitate future analyses and evaluations required in specific research studies. If we have five accounts, all five records will be there. Perhaps there is a way of looking at all five of these accounts and making some use of the information.

In Phase IV the development of the subject matter classification system and a complementing card indexing system will take place. This involves, of course, the coding of all information compiled into the data banks and providing suitable documentation for users of the system.

The fifth and final phase of development involves the design of a "Northern Affairs Data Base System Catalogue". It is intended to publish the catalogue on an annual basis and it will be widely distributed.

Before I briefly outline our plans for the future I will make a couple of more remarks with respect to the demographic section of our data base system. Chart I depicts the physical layout of the demographic component. A number of designs were considered but this one has proven to be the most efficient in handling the large volumes and various types of data inventorized. Presently the demographic data is being classified in accordance with the system in Chart I. Any pertinent documents (methodology, procedure manuals, evaluation reports, etc.) which explain limitations on the data, e.g. coverage completeness or accuracy, are maintained as well.

TABLE I

Population

Source		Year	NORTHWEST TERRITORIES Indian	Eskimo	Other	Total	YUKON Indian	Other	Total	Source
*CENSUS		1966	6,274	9,792	10,799	26,865	2,337	12,045	14,382**	*CENSUS
**Health Conditions in NWT Annual Reports by Medical	*		6,274	9,792	12,672	28,738	3,400	10,982	14,382*	**N.H.&W Medical Services.
Services N.H.&W	**	1967	5,763	10,278	14,202	30,243			14,000	Annual Report
	**	1968	5,972	10,736	13,596	30,304	2,500**	13,500**	15,000	
	**	1969	6,180	11,175	13,928	31,283	2,500**	13,500**	15,000	Estimates Stats. Canada
	**	1970	6,399	11,619	14,322	32,340	3,011	15,000	18,011**	
	**		7,009	13,077	14,914	35,000				
	*	1971	7,185	11,400	16,225	34,807	2,580	15,805	18,388*	
	♦	1972	7,251	13,267	15,523	36,041	3,028	18,710	21,738**	
	±	1973	7,402	13,630	15,978	37,010	2,655	15,635	16,390**	
♦ Health Conditions in NWT Annual Report NWT Government	±	1974	7,533	13,932	16,384	37,849	3,085	16,915	20,000**	
	**		7,011	13,781	15,308	36,000				
	±	1975	7,678	14,303	16,867	38,848	3,119	19,470	22,589±	
	±	1976	7,812	14,723	17,334	39,869	3,115	21,628	24,743±	From Annual Reports of Medical Services Br.
	*					42,609			21,835*	
	±	1977	7,951	15,138	21,034	44,123	3,177	20,946	24,123±	*YHCIP
		1978				46,386				
		1979								

TABLE 2

Demographic Information on the Yukon and Northwest Territories

	POPULATION			BIRTHS			DEATHS		
YEAR	YT	NWT	TOTAL	YT	NWT	TOTAL	YT	NWT	TOTAL
1951	9,096	16,004	25,100	342	649	991	85	284	369
1956	12,190	19,313	31,503	481	785	1,266	85	291	376
1961	14,628	22,998	37,626	558	1,117	1,675	94	262	356
1966	14,382	28,738	43,120	369 369	1,158 1,076	1,527 1,445	82 82	229 206	311 288
1974	20,500 20,629	39,400 39,400	59,900 60,029	495 451	1,042 1,239	1,537 1,690	114	206 221 216	320
							103	272	375
1975	22,589 21,100	 40,600	 61,700	408 495	1,175 1,042	1,583 1,537	112 114	216 206 197	328 320
1976	21,836	42,609 46,297 42,300	64,445						
1978	24,968 21,600 23,176	43,400 46,386							

This information is not comprehensive. The "working sheets" for the data base have revealed multiple accounts of as many as four per cell and the number of sources since 1951 (presently found) is in the order of twenty.

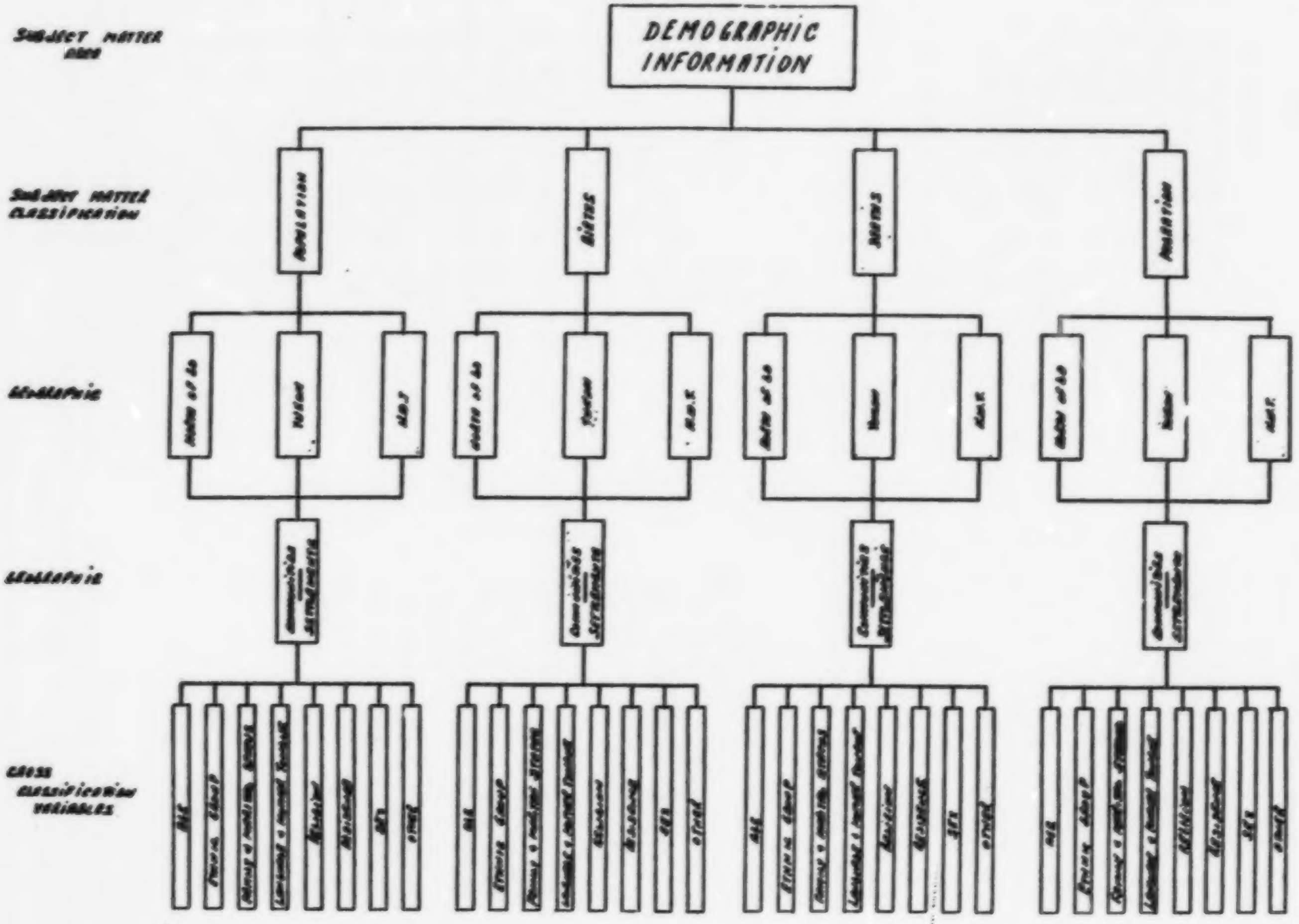
SUBJECT MATTER AREA
DEMOGRAPHIC INFORMATION
SUBJECT MATTER CLASSIFICATION
POPULATION
BIRTHS
DEATHS
MIGRATION
GEOGRAPHIC
GEOGRAPHIC
CROSS CLASSIFICATION VARIABLES

CHART 1

There are obvious information "gaps" appearing already, e.g. lack of adequate migration information for both Territories. Table 3 serves to illustrate this point.

III

It is well recognized that there is considerable research to be pursued in the demographic field, not to mention numerous social and economic areas. We will continue to pursue the design and development of our data base system. This will permit us to establish a centralized set of data banks on northern demographic and socio-economic information which could be used by government officials (federal and territorial), indigenous groups, private groups, university institutions and researchers in an effort to reconcile problems in data deficiencies and discrepancies.

Secondly, as and when relevant and adequate information emerges from our data base system we will be publishing a series of monographs which will contain the principal statistical tabulations and provide adequately documented interpretive analysis. That is the important key. Procedures, methodology, limitations on the data will be combined with the data banks, not disaggregated, where you ask for a special tab from Statistics Canada, it comes over and you've got your little paragraph there that says what the limitations are briefly but there is no methodological explanations or procedures discussed.

Third, the need for consistent, accurate and regularly updated material is urgent. Specifically our requirements are in areas such as:

i) demography, in particular migration;

ii) labour force activity including employed, unemployed, work experience, those not in the labour force, participation rates, unemployment rates;

iii) educational attainments;

iv) pricing information, and in particular "expenditure patterns surveys" to identify a "basket" of goods and services and a corresponding set of weights which reflect consumer expenditure patterns.

I want to note that over, perhaps, eight years there have been a lot of pricing surveys. They are done in the stores, the prices of commodities are recorded. But Health and Welfare is concerned and we are concerned that there is a lack of adequate nutrition. We understand these questions; we're looking for the answers, but you're not going to get it by pricing commodities in the stores - you're going to have to go to the people and that's a difficult thing to do.

TABLE 3

BASIC DEMOGRAPHIC INFORMATION PERTAINING TO THE NORTH

1921 - 1960

YEAR	POPULATION			BIRTHS			DEATHS			MIGRATION		
	YUKON	N.W.T.	NORTH	YUKON	N.W.T.	NORTH	YUKON	N.W.T.	NORTH	YUKON	N.W.T.	NORTH
	NUMBER											
1921	4157	8143	12300	..	..	..	..	..	..	..	..	..
1922	4000	8000	12000	..	..	..	..	..	..	..	..	..
1923	4000	8000	12000	..	..	..	..	..	..	..	..	..
1924	4000	8000	12000	31	95	126	38	47	85	..	..	..
1925	4000	8000	12000	22	57	79	63	32	95	..	..	..
1926	4000	8000	12000	27	75	102	68	51	119	..	..	..
1927	4000	9000	13000	29	126	155	33	133	166	..	..	..
1928	4000	9000	13000	30	222	252	46	367	413	..	..	..
1929	4000	9000	13000	35	133	168	54	168	222	..	..	..
1930	4000	9000	13000	45	232	277	69	206	275	..	..	..
1931	4230	9316	13546	40	141	181	66	106	172	..	..	..
1932	4000	10000	14000	44	195	239	62	122	184	..	..	..
1933	4000	10000	14000	58	179	237	60	128	188	..	..	..
1934	4000	10000	14000	44	203	247	48	154	202	..	..	..
1935	5000	11000	16000	58	231	289	69	175	244	..	..	..
1936	5000	11000	16000	38	229	267	82	177	259	..	..	..
1937	5000	11000	16000	83	211	294	81	147	228	..	..	..
1938	5000	11000	16000	76	226	302	63	181	244	..	..	..
1939	5000	12000	17000	63	234	297	82	194	276	..	..	..
1940	5000	12000	17000	84	240	324	56	187	243	..	..	..
1941	4914	12028	16942	72	316	388	67	307	374	..	..	..
1942	5000	12000	17000	96	369	465	108	222	330	..	..	..
1943	5000	12000	17000	99	403	502	120	304	424	..	..	..
1944	5000	12000	17000	136	316	452	100	349	449	..	..	..
1945	5000	12000	17000	123	511	634	87	478	565	..	..	..
1946	8000	16000	24000	146	593	739	80	347	427	..	..	..
1947	8000	16000	24000	224	625	849	77	376	453	..	..	..
1948	8000	16000	24000	274	645	919	112	370	482	..	..	..
1949	8000	16000	24000	309	644	953	86	434	520	..	..	..
1950	8000	16000	24000	316	622	938	99	332	431	..	..	..
1951	9096	16004	25100	342	649	991	85	284	369	..	..	..
1952	9000	16000	25000	390	642	1032	94	341	435	..	..	..
1953	9000	16000	25000	383	676	1059	116	294	410	..	..	..
1954	10000	17000	27000	425	631	1056	85	250	335	..	..	..
1955	11000	18000	29000	524	732	1256	72	250	322	..	..	..
1956	12190	19313	31503	481	785	1266	85	291	376	..	..	..
1957	12000	19000	31000	494	900	1394	93	325	418	..	..	..
1958	13000	20000	33000	473	945	1418	92	333	425	..	..	..
1959	13000	21000	34000	537	990	1527	89	289	378	..	..	..
1960	14000	22000	36000	538	1094	1632	97	312	409	..	..	..

.. Data not available

Source: Statistics Canada

PREPARED BY: Data Management Division,
Northern Economic Planning Branch,
Indian and Northern Affairs,
Les Terrasses de la Chaudière,
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K1A 0H4

It should be recognized, however, that caution must be exercised in any attempts to launch major systems. I believe past history has taught us that designing, developing and implementing systems without adequate planning in the areas of updating vehicles, maintenance and evaluations has ended in failure. More comprehensive planning in these areas must be done if we are to develop data banks which are consistent, accurate and updated on a regular basis.

Until adequate systems are in place, it is necessary that we make the best use of existing information. This implies more use of administrative sources, which were not designed to take into account the demographic or socio-economic concerns of researchers. We are presently pursuing these areas; specifically, talks will be taking place with the Yukon territorial government to conduct an evaluation of their Health Care Insurance Plan records and make recommendations for their improvement.

In conclusion, I would just like to say that the Data Management Division of the Department of Indian Affairs and Northern Development is prepared to do all we can in the efforts to improve the demographic and socio-economic information pertaining to Canada's two northern territories.

Comment by Karol Krótki, University of Alberta:

I noted your five disadvantages of the census material and I would suggest that you remove the complaint about random rounding. It is an advantage and not a disadvantage and the reason why I suggest that it is an advantage is that it makes people aware that they must never think in terms of the last digit. Never, with any data.

"Recent studies of the population of the Northwest Territories"

Glen Grant

Department of Planning and Program Evaluation
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Yellowknife, N.W.T.

So far this morning we have been alternating between a territorial view and a federal view of demography. From a territorial view I think the statistical needs of both have been presented by Del Stewart - he has mentioned some of the things that are important. I think the needs are the same but possibly our orientations and methodologies and priorities differ somewhat. So what I will do in the next 20 minutes, is to convey three major pieces of information. The first will try to portray a general awareness of the statistics function in a territorial government; second I will describe publications that we have put out in the last year or so and some of the other activities to which we address ourselves, and third, I will highlight some of the major projects that we have undertaken with respect to demography.

I am not a demographer by any stretch of the imagination so am somewhat intimidated by the strength of the demographic discipline here, but nevertheless, I will comment on some of the procedures that we have used, decimation projection series that have come out and a list of some responses which are, I hope, critical in a positive sense.

This is not a formal presentation, so if there are questions at any point please stop me and we can deal with them immediately. I have brought along a set of publications to look at if you have time,* a list of publications that we have put out recently, and a statement on who we are, some of our activities and the general framework that we fit into in the government.

The first thing is to go over the general statistical environment of the territories. This morning Del mentioned some of the problems that we are faced with. I would like to reiterate some of them for emphasis. We have a general low level of service from federal statistical agencies, coverage of publications is not complete. We are aggregated with the Yukon Territory in many of their publications and this is especially seen on the economic side, so a lot of the survey data is not assigned to the individual territory. We may find ourselves aggregated with B.C. or with some other provincial grouping like the prairie provinces and we are imbedded in that type of thing.

*Recent Publications of the Government of the Northwest Territories Concerning Population.

Confidentiality restricts us again. Random rounding may reinforce a sense of change in a community but does present problems; when you take a small community like Pelly Bay and partition it off by age, sex and ethnic grouping, you end up with a meaningless matrix. Even without a confidentiality restriction, you have problems with residual disclosure, number of respondents, this type of thing.

Another problem we face is that there are a lot of statistics around but there's not an integrated framework of presentation. You can go through any northern library and see many consulting firms at work but they lack a temporal framework and they do not cover the Territories as a whole.

Another problem area is the use of the survey vehicle. It becomes very expensive, involves a lot of travel, and the pressure to respond creates a burden. Most northern communities have been surveyed to death and we are given the strictest orders to really question any use of surveying. Also, surveys do not produce reliable small area statistics.

We're a very small government and cannot afford to support a large statistics function so, in fact, many of the departments rely on us for almost a consultative service and provision of statistical needs. Therefore another part of the statistical environment is the available administrative records on our side. These include health-care records, social assistance files, student records, vital statistics, personal income, family allowance and old-age security. We are gradually attempting to use these records as much as possible. Many of them are used in the delivery of N.W.T. and federal programmes.

We are set up to provide a government-wide perspective in the statistics area to acquire relevant information and the key word is relevant information - for planning, for establishing priorities and for policy decision making. Again I emphasize that it has to be relevant, which means it has to be as up-to-date as possible. Not only do standard things have to be credible, they have to be consistent. Not long ago, many simple things like population numbers showed conflicting numbers of people in each community. We are attempting to standardize this function in one place so we won't end up with five or six different sets of numbers.

We used to be a part of the Department of Planning and Program Evaluation, and all of our current publications carry that name. We are now part of a group called the Executive Committee Secretariat and form a sub-group of it, the Statistics Bureau consisting of three people.

Although primary emphasis is placed upon internal government needs, the bureau also provides statistical information to the public and industry. The scope of this dissemination activity ranges from relatively simple information retrieval to more sophisticated statistical analysis required for policy and planning activities. The data development emphasis of the statistics bureau has limited its dissemination activities. Nevertheless the bureau does prepare and distribute a small set of publications. This list includes:

- Annual Population Figures;
- Population Projections;
- Methodological Reports;
- Community Age, Sex and Ethnicity Estimates;
- Summaries of Community Income;
- Historical Migration Statistics;
- Summary Reports on Information Obtained from Administrative Records.

New work in the dissemination field includes the preparation of a comprehensive statistical abstract of the Northwest Territories to be released in February 1980, and a statistics quarterly publication.

In the two years of our existence, a lot of our activity has been in the area of just defining basic population numbers and setting up the infrastructure for carrying on intracensal estimates and possibly reconstructing some of the work that has been done in the '76 census which is generally accepted to be under-enumerated. We have also got into the area of supplying projections, doing evaluations, or supporting evaluation systems for Planning and Program Evaluation. Our emphasis in the last couple of months has been shifting away from the population area towards economic and social statistics.

The first major effort that we made was to get a one-point-in-time population enumeration across the Territories. That was at the end of '77 and incorporated three methods -

1. Up-date of all settlement lists: this covered most of the small communities and some of the medium sized communities. In Fort Simpson and Pine Point, we commissioned enumerations and in the larger centres - Yellowknife, Frobisher Bay, Inuvik - we did statistical estimates. At that time other information that was collected was the basic ethnic distribution of these communities. From that, a set of projections followed a very simple mathematical model. We were required to submit a set of ten-year projections every year. Given the base population, we took those figures and adjusted them by births and deaths and incorporated a component for migration on which I will comment briefly later.

2. Another approach was to take population estimates, integrate them with the ethnic distribution and come up with a base population estimate, community by community, according to ethnic groups, age groupings, sex. It became a cryptic analysis, perhaps more art than science, to integrate the various components of information available into a one time or one-point-in-time estimate on all the variables.

3. Another aggregate area I mentioned was population projection and last year we developed a fairly sophisticated population projection model incorporating mortality and fertility rates generated over the last 10 years using up-to-date information, vital statistics records and again reconstructing the population background to define the population at risk over these various mortality and fertility rates.

In the development of the vital statistics, we are busy, whether this means acquiring data from Statistics Canada or reconstructing history or finding a more efficient way of dealing with it in Yellowknife as it comes in or developing social service administrative files so that we can have community-by-community information. You may be aware that the new territorial health program is on a year-to-year annual registration basis. We hope to clear up the problem that I believe has been experienced with the Yukon health records in which you find more registrations on the files than the population can account for, by integrating the claimant file, practitioner's file and registration file within the health area. This linkage can produce a wealth of very interesting statistics both at the community level as well as general variance reports.

We're also involved in the 1981 census. We are taking an active part in planning. It has been suggested that there be a second team of personnel from the territorial government in the operation of the '81 census. We have been able to help construct more relevant definitions for the '81 census. They are going to keep the question of the Métis on the form and we hope it will remain a self-perception type of choice. I don't see how they could do it otherwise. Occupation is another type of information we have something to say about.

Revenue Canada is providing us with some data through which we are finding a fairly good reported income by community. Most people here will be aware of the problems of the imputed values of traditional activities but at least, what we have is reported and it's consistent.

We were the first provincial or territorial unit to acquire access to the family allowance records through Health and Welfare and their informations systems group. This has given us a lot of information for the 0-15 age group which in some places, for example the

Keewatin, forms 50-57% of the population. The family allowance is a virtual census of that population. There is a financial incentive to become part of the program and the reporting and its statistical reliability is high. We have been able to geo-code all claims to the postal code aggregation.

We have spent some time in the interim of our re-organization phase, on the development of a comprehensive statistical abstract and quarterly. The abstract is almost completed. It breaks down the relevant statistics by populations, social statistics and economic statistics. It is presented graphically because we hope it will be used in schools. There is also a text which highlights basic trends and visually portrays them and then you have your actual data. That should be out soon and it is fairly comprehensive. It documents all the vital statistics back as far as we can go. We are investigating with Agriculture Canada a price survey on a nutritional food basket as opposed to a behavioural food basket, the difference being what one should eat as opposed to what one actually buys. But at least it's a consistent pricing mechanism that we can link into the national grid and we are attempting to start with that and move into a separate regional food price survey. With limited manpower, we have attempted to start one project and have it fully operational before we move on to another, so that the process remains healthy.

We're not in the business of publishing but we must at least document our work because one of the major complaints with previous information that has been generated within the Territorial Government is that you lack any continuum. So we have been documenting every procedure and trying to work backwards and fill in some of the gaps as we go along.

"Language Loyalties among Amerindians & Inuit"

Objective Estimates Through Life Table Techniques

Karol J. Krótki,

Department of Sociology, University of Alberta

At the workshop, Professor Krótki gave an oral presentation demonstrating his use of life table techniques. For this publication, he has kindly provided us with a fuller, scholarly account of language loyalties among Canadian native groups. We are pleased to be able to reproduce this paper in full.

Abstract

Data from several censuses and for various areas of Canada have been exposed to analysis, but this report is limited to the censuses of 1961, 1971 and 1976 for Canada as a whole and some selected provinces.

An analytic model already used in published and unpublished work is applied to the native populations of Canada. Four age and sex specific retention rates based on life table techniques are considered for the three censuses and the two inter-censal periods. In the absence of the ethnic question in 1976, 'survivals' since 1971 among language groups (mother tongue only) are used instead. Some discussion is offered of the importance of the differences in the treatment of 'non-responses' between censuses. A speculative projection is implied of language loyalties in the future assuming the continuation of past trends.

The demographic results are then used as inputs for socio-political consideration, such as the changing nature of Canadian multiculturalism with the declining importance of multilingualism.

1. Languages in Canadian life and their reflection in Canadian censuses

Languages were always important in the Canadian society. The inhabitants of the country before the arrival of the Europeans were traditionally considered to have spoken eleven languages (Frideres 1974:12). The Europeans brought with them several more and later immigrants from non-traditional sources added still others, so that by the second half of the 20th century well over forty languages would have to be counted in any reasonably complete census as having been used in one way or another in the territory of Canada. The study of language in Canada is bedevilled by difficulties of recording multilingual use, problems of recording changes in use, and changes in recording practices.

The most important language problem is the dichotomy between the English and French users found at the cornerstone of the Canadian constitution. It is this political importance of the two official languages, occasionally threatening the very existence of the state, rather than the anthropological curiosities associated with the multiplicity of the non-official languages, that gave rise to the richness of data on languages in Canadian censuses. Some questions on language were always asked: the ability to use one or both official languages, the language used most often at home or at work, and mother tongue defined as first learned and still understood. Any study has to take into account not only the nature of the question(s) asked during any census, but also the kind of coding and aggregation undertaken during the office treatment of the census data and pre-publication decisions. For more recent censuses the flexibility has increased considerably due to the availability of computer based data, but even with computers only subjects asked and categories coded can bé obtained for analysis.

2. The demography and languages of the Amerindians, Inuit, and Metis

The interest of the language question is increased when compared with ethnicity data. Ever since the confederation the ethnic question has acquired for all practical purposes the status of a constitutional requirement: the French-Canadians would refuse to take part in a national census unless assured that they would not lose their statistical identity. Yet the focusing on the language issues in recent years became so critical that the ethnic question was dropped for the purposes of the 1976 census without apparently creating a crisis.

In 1971 (1961) 295,000 (208,000) Canadians reported themselves as native Indians and 18,000 (12,000) as Inuit. Both groups experienced during the ten intercensal years the very high growth of 42 per cent and 48 per cent respectively. These increases are faster than the increase in those who spoke native languages; from 157,000 in 1961 to 180,000 in 1971, or 15 per cent.

The population size of the Amerindian & Inuit ethnic groups, as reported in recent censuses, is small in comparison with popularly used data. One of the reasons for this discrepancy is the absence of Metis as a category. (1) They were reported for the last time in 1941 as 35,000. Although experiencing an age distribution, which implied very high fertility (high proportion of children), they did not grow at all since 1921 when they were also reported as 35,000. (2) They either had very high mortality in between, that is mortality equal to their fertility, a situation almost inconceivable demographically, or they had losses to other ethnic groups. The latter is not an impossible scenario; various writers have shown that, say, the French ethnic group transferred some 300,000 or 400,000 to the English (e.g., Henripin 1974).

Another source of uncertainty is the statistical dichotomy between registered Indians and nonregistered Indians, sometimes also called status or band Indians and nonstatus or nonband Indians.

In the late seventies only the Inuit estimates clustered narrowly, centering on about 20,000. The registered Indians could add up to as much as 300,000 or even slightly more. The nonregistered Indians are being cited anywhere between 50,000 and 250,000 while for the Metis there is no lower figure (35,000 in 1941 at 20 per cent per decade could give by 1976, say, 70,000) and the upper figure increases by leaps and bounds every time somebody comes up with a new guestimate; these being wild rather guesses, than outcomes of estimation procedures. (3)

These data suffer from two sources of disadvantages. On the one hand registered Indians are a legal concept and are only part of the ethnic and anthropological reality. They have their own sources of statistical and definitional strength and are not interested in outsiders. In fact, they probably sense that their privileges would be jeopardised if diluted among too many. On the other hand the nonregistered Indians and the Metis are on the horns of an unbridgeable dilemma. If they remain few, their political clout will be limited. If they drum up large numbers of recorded adherents, the possibility of obtaining any rights and privileges comparable to those of the registered Indians becomes that much less realistic. A quarter of 160 acres a family for 10,000 families is one thing, four quarters a head for a million Metis is something else. (4)

3. Data available and indices used

This paper is concerned with the analysis of the mother tongue data. We do not take up the 1971 data on home language, partly because no intensive intercensal comparisons are yet possible. (5) There are severe problems in the use of these data. As an illustrative example, it is interesting to take a quick look at the questionnaire editing procedure with regard to mother tongue in the 1976 census (Kralt 1980; Lamy 1977a and 1978). The arrangement was that the two official languages and three unofficial languages (German, Italian, and, recently added, Ukrainian) had tick-off spaces. Other languages had to be written in. If both official languages were entered, one was chosen at random (itself a complex and rigorous computer programme). If one official language and one nonofficial language were ticked-off, the official language won. If one nonofficial language was ticked-off and another nonofficial language was written in, then the ticked-off nonofficial language won. If there was no entry...This is not the end of the story yet, but by now the reader will have the flavour of the problem facing processors of large scale data. (6)

In this paper we do not engage in the niceties of the discussion made possible by the reoccurrence (there was a similar question in 1911, but not comparable; Kralt 1976:6) of the home language question. Inasmuch as home language can be conceived as used half a generation later (our interpretation of Castonguay 1975:21) than mother tongue, our analysis is (deliberately) outdated and refrains from showing the most recent changes on the ethnicity and linguistic front.

4. Data available and indicators used

The data from three Canadian censuses of population were used (1961, 1971, and 1976) and the two intercensal periods were studied (1961-71 and 1971-76). From the 1961 census and the 1971 census both the ethnic origin and mother tongue are available. From the 1976 census, as already indicated in section 2, only the mother tongue is available.(7) While the definitional consistency between ethnic origins and mother tongues is high (as a rare exception, the study of German mother tongue requires the adding up of German and Austrian ethnic origins), there are some problems in following mother tongues between censuses. Some languages have been dropped as a mother tongue in the 1976 reports and some languages were subject to procedural changes. In 1976 the Inuit languages were no longer lumped with the native Indians, but included with the "other". In the ethnic comparison in 1971 they were less than 6 per cent of the Amerindian & Inuit group. This is a small loss in comparison with the loss of comparability due to the suspension of the imputation procedures applied in the case of non-responses.

For the purposes of this enquiry the Amerindians & Inuit are compared among provinces, the four eastern provinces having been lumped together. The Amerindians & Inuit in each province are assumed to be comparable, although we know they differ in terms of such characteristics as affect language retention: rural-urban proportion, exposure to immigrants, age distribution, school attendance, income level, degree of inter-marriage, occupational composition (for the effect in the case of immigrants see Wolowyna 1978), and no doubt others. We deal completely with the influence of the age and sex distribution by looking at each age and sex group separately. For the other variables it can only be said that the differences we will be observing and the changes we will be reporting are so great that they are unlikely to result in different conclusions even if space allowed us to "hold them constant".

Four indicators were designed for the current study (not "invented" because they are routine stuff in demographic analysis). Two compare the ethnic origin with the corresponding mother tongue at the same time. Two compare the fate of the given mother tongue between two censuses. All four are what is called in demography - age and sex selective, that is they are obtained separately for each age and sex group. For each type of comparison (ethnic group with mother tongue at the same time, mother tongue at two different times) we have a probability and an expectancy. The probability is akin to the life table probability of reaching the next age group, and the expectancy expressed in years of remaining life, is akin to the life table life expectancy.

5. "Retention probability" (abridged to rp)

This is the ratio of numbers reporting an Amerindian & Inuit mother tongue to the numbers reporting an Amerindian & Inuit ethnic origin at the time of the same census, the comparison being made for each and the same age

and sex group. Algebraically:

$$\frac{{}_{a}M_{x}^{t}}{{}_{a}E_{x}^{t}} = {}_{a}p_{x}^{sp}$$

where: M = no. of persons reported speaking an Amerindian or Inuit tongue

E = no. of persons reported in an Amerindian or Inuit ethnic origin

t = census date

x = age and sex group

a = type of population: all or urban or rural-farm or rural-nonfarm

p = proportion of Amerindian & Inuit ethnic origin speaking an Amerindian & Inuit mother tongue

rp = retention probability as defined above

6. <u>"Survival probability"</u> (abridged to sp)

This is the ratio of the number of persons reporting an Amerindian & Inuit mother tongue at one census, to the number of persons reporting the same mother tongue at the previous census, the comparison being with the correspondingly younger age and sex group (i.e., for the same persons). The ratio reflects not only losses (and gains) between the census dates in the number of persons speaking a given mother tongue, changes due to census procedures and census completeness, but also losses by natural mortality and gains (or losses) by migration. Algebraically:

$$\frac{{}_{a}M_{x+n}^{t+n}}{{}_{a}M_{x}^{t,}} = {}_{a}p_{x}^{sp}$$

where: n = number of years between censuses or number of years by which each age and sex group aged between censuses; that is, 10 in the case of the 1961-71 comparison and 5 for the 1971-76 exercise;

other symbols as explained in section 5.

7. "Remaining years to speak" (abridged to ys)

Assuming that the losses between an ethnic origin and its mother tongue, as observed during the given census of population, will continue into the future, ys gives the number of years which each age and sex group of Amerindian & Inuit ethnic origin will continue speaking, on the average an Amerindian & Inuit mother tongue. Algebraically:

$$ {}_a\ell_x^{ys} = \frac{{}_aT_x}{{}_a l_x} $$

where:

$$ l_x = \frac{l_{x+n}}{p_x^{sp}} ; \text{ but } l_o = 100{,}000 $$

$$ T_x = {}_5L_m + {}_5L_{m-5} + {}_5L_{m-10} \cdots + {}_5L_x $$

$$ {}_5L_x = (l_x + l_{x+5})\ 5/2 $$

m = the last or oldest age group available;

others symbols as explained in sections 5 and 6.

The first and the last L_x were calculated somewhat differently from the formula shown above; procedures standard in demographic analysis and not shown in this paper were followed.

8. "Remaining years to live" (abridged to yl)

Assuming that the experience in terms of natural mortality, migration, mother tongue usage, changes in census procedures and in census completeness observed between the censuses will prevail into the future, yl gives the number of years left to each age and sex group to live and to speak an Amerindian & Inuit mother tongue. The values given are those of the age and sex group at the time of the earlier census. Algebraically:

$$ {}_a\ell^{yl} = \frac{{}_aT_x}{{}_aT_x} $$

where:

$$ l_x = \frac{l_{x+n}}{p_x^{sp}} ; $$

- other symbols as explained in sections 5, 6, and 7.

The difference between ye and yl is more than subtle. The value of ye gives for each age and sex group in the Amerindian & Inuit ethnic origin group the number of years left on the average to the ethnic Amerindians & Inuit to speak their mother tongue; it takes account of the losses experienced by the Amerindians & Inuit prior to the census considered, that is to say, throughout the lives of the Amerindians & Inuit; it includes losses even before the respondents were born, if they were born without learning in due course their mother tongue. It is a historical indicator, contrived somewhat artificially. The value of yl abstracts from the weaklings or their forefathers who fell by the linguistic roadside as members of their ethnic group. It focuses on the mother tongue alone and shows for each age and sex group in the Amerindian & Inuit mother tongue group, the number of years left to the Amerindian & Inuit mother tongue to live and to speak; it takes into account only changes (by natural mortality, by migration, by census procedures, by language usage and by census completeness) since the previous census and assumes their continuation into the future. yl is a more current index than ye.

9. The recent fate of mother tongues in Canada

From a perusal of publicly available data (not repeated in this paper) it is clear that, while the two official languages flourish, though French much less than the average population growth, the unofficial languages experience a general decline. Between the 1971 census and the 1976 census the declines were general and marked. There were though, several exceptions, none subject to enquiry in this paper. In the five years intervening, the Spanish, the Indo-Pakistanis, the Portuguese, and the Chinese and Japanese recorded growth of 85, 80, 46 and 33 per cent respectively (typescript released by Statistics Canada with their microfiche on tongue, undated and unnumbered). It will be understood, of course, that the large size of these increases is partly due to the small base with which these mother tongues started in 1971. It will be recalled from an earlier remark in this paper, that the Amerindian & Inuit speakers increased between 1961 and 1971 by less than 15 per cent, while those reporting the Amerindian & Inuit ethnic origin increased by 42 and 48 per cent respectively. There has, thus, been a relative decline in the Amerindian & Inuit speakers. The remaining part of the paper is concerned with the age and sex specificity of this decline and how differentially it affected various provinces.

10. Figure verbalisation: ethnic and language comparison within the 1961 and the 1971 censuses

Figure 37 shows the Amerindians & Inuit of the nine provinces and territories of Canada (the four Atlantic provinces lumped together as one) with the proportion in each age and sex group still speaking their mother tongues in 1961. The provinces and territories fall into two categories. Yukon and British Columbia (hereafter BC) have vertically inclined curves, the other seven are more horizontal.(8)

We can label the seven as "nations", because they behave like national groups: all age groups carry on in a similar manner. They might have lost much of their ability to speak their mother tongue, like Ontario, but the age differential is not very great. Even if severe, their losses appear to be long standing, not age selective. Yukon and B.C behave like weak ethnic groups, where the youngsters are assaulted by the majority language and are the first to lose their ability to speak. Their losses appear to be recent and it is in the nature of the curve that one expects losses to continue with the aging of the population.(9)

Apart from the curiosity in Alberta that some other ethnic group(s) than Amerindians & Inuit speak their mother tongue, (10) we may arrange the seven "national" and the two "ethnic" provinces in the following pecking order descending in the ability to preserve their mother tongue:

1961	1971
Alberta	Northwest Territories
Northwest Territories	Manitoba
Manitoba	Atlantic
Saskatchewan	Quebec
Atlantic	Alberta
Quebec	Saskatchewan
Ontario	Ontario
British Columbia	British Columbia
Yukon	Yukon

We see in 1971 (figure 38) that Yukon and B.C. remain the "ethnic groups" they were labelled in respect of 1961. The extraordinary behaviour of those aged over 30 in Alberta in 1961 is no longer there; in fact, Alberta slipped by four notches in the pecking order.(11) Quebec developed an atypical curve, which it will be more convenient to note in the next and subsequent sections.

Females, if they differ from the language retention of males, do so, with few exceptions, by losing their language faster than males. The exceptions are the elderly women in the Northwest Territories (hereafter: NWT; recalling the elderly rural Ukrainians in Krótki 1978) in 1961, and the elderly women of Manitoba also in 1961. (One is justified in not mentioning here the aberrant cases in Yukon in 1961 and in 1971: the numbers are small, and the curves behave unreliably.)

11. Figure verbalization: language losses between the 1961 and 1971 censuses

If figures 37 and 38 are shown on facing pages, then one notices immediately that the whole bunch of curves moved downwards between 1961 and 1971 by about 0.2 in the value of p^rP, a loss of a fifth of the total capacity of an ethnic group to speak its mother tongue. This particular aspect is shown more clearly on figures 43 and 44.

Yukon on figure 43, BC on figure 44, the two vertical or "ethnic group" provinces, and Poles on figure 44 are to serve the purposes of comparison with the "national" or horizontal provinces. We see that in 1961 the 22 year old, as an example, Yukon Amerindians & Inuit still spoke in their majority ($p^rP=0.72$) the Amerindian & Inuit mother tongues. By 1971, when they became 32 years old, only 46 per cent of them did so. The corresponding percentages in BC are 59 and 32. For Poles the same values are 34 and 34. In other words the grown-up Poles in this particular comparison did not lose their mother tongue, but substantial proportions of the Amerindians & Inuit of Yukon and BC did. [12]

Reading off the same information for the seven horizontal provinces we obtain the following values at ages 22 and 32 in 1961 and 1971 respectively:

	1961	1971	losses in percentage points
Atlantic	79	63	16
Quebec	78	62	16
Ontario	59	46	13
Manitoba	93	80	13
Saskatchewan	89	73	16
Alberta	97	73	14
Northwest Territories	95	92	3

We can see immediately one more consequence of the vertical behaviour in Yukon and BC. Their losses in terms of percentage points between 1961 and 1971 were 26 and 27 in comparison with the smaller percentages in the horizontal provinces (3 to 16). What are the anthro-cultural and socio-political features of life in Yukon and in BC, which make the behaviour of Amerindians and Inuit there so very much different from that in other provinces? [13]

12. Figure verbalization: expectancies based on 1961 and 1971

The probabilities used in the previous two sections and depicted in figures 37, 38, 43, and 44, have been translated into the form of life expectancies at given ages x and shown in figure 39. These are the life expectancies of the Amerindians & Inuit, as an ethnic group taking into account all conceivable sources of losses suggested in section 8. To those accustomed to demographic curves, NWT and Alberta in 1961 still behave like ordinary human populations subject to ordinary mortality, albeit at a high level (life expectancy at birth for males 38 and 45 respectively). By 1971 the two drop to levels that no currently surviving human populations in the era of the World Health Organization would dare to report as ordinary mortality. The other curves shown here are merely examples of extraordinary and unusually shaped losses: the age selectivity in Yukon (and BC, not shown on figure 39). Some of the age selectivity comes through in this index and shows in the shape of the national curve. This selectivity was not so clearly visible in the p^{rp} discussed in sections 10 and 11.

13. Figure verbalization: language behaviour in the intercensal periods of 1961-71 and 1971-76

The two previously considered indices (P^{rp} and $\mathring{e}^{ys}$) compared the Amerindian & Inuit mother tongues as proportions of their ethnic origin group. In the two other indices (P^{sp} and $\mathring{e}^{yl}$) a comparison is offered within the mother tongue at two subsequent censuses. In figure 41 P^{sp}, the "survival probability" of three illustrative provinces and that for the country as a whole is demonstrated.(14) At the national level the losses by mother tongue alone in the period 1961-71 are roughly at the same level (1.0 minus about 0.8) as the losses throughout the historical period between the ethnic origin and mother tongue as caught at the time of the 1961 census (figures 43 or 44). Losses within the mother tongue during the short period of five years 1971-76 (1.0 minus about 0.6) are about the same as those between ethnicity and mother tongue for the whole historical period as caught in 1971 (1.0 minus about 0.6 in figures 43 or 44). (15)

The Northwesterners, brave when comparisons were made with their ethnic origin, show disastrous changes between the period of 1961-71 and 1971-76. They might have been victims of considerable nonresponse in 1976, that remained nonimputed and caused a large "not stated" category. The Quebec curves show again on figure 41 the age selectivity in the change from 1961 to 1971 already noted on figure 43 (also seen from a comparison between figures 37 and 38), but the lesson is muddied by the methodological consideration referred to in endnote 14. BC is shown in order to enable us to see whether the vertical behaviour of an ethnic group carrying on vertically without what we called, in section 10, the "national", horizontal behaviour, based as it is on the ethnicity-language comparison, will display anything new on the basis of a language-language comparison. Bearing in mind the methodological difficulty referred to above, we might risk saying that the losses at young ages in BC are greater than at older ages in the vertical groups of other provinces.

14. Figure verbalization: expectancies based on 1961-71 and 1971-76

Figure 42 translates the data used in the previous section (index P^{sp}) into index $\mathring{e}^{yl}$. It apparently avoids some of the methodological anarchism of figure 41 [16] and it shows the expectancy of the ability to speak and live, if the intercensal period were to be taken seriously with all its experiences, including methodological losses (and gains, if any) listed in section 8. In section 12 during the discussion of figure 39, the thought might have suggested itself that we see a unnecessarily pessimistic picture of the current times, the denominator of the ratios being based on a somewhat distant and historical concept, namely that of ancestral ethnic origin. Here, in figure 42, we have only recent data: two consecutive censuses with the ability to understand the mother tongue at the time of each census, that is to say, no previous losses are entering the account. Yet the curves are lower and flatter than in figure 39, especially when the more recent periods are compared (the lower parts of figures 39 and 42). [17]

15. An attempt at a typology by province

The use of the two indices called "retention probability" (P^{rp}) and "remaining years to speak" ($\mathring{e}^{ys}$) suggested four conclusions (marked me for mother tongue-ethnicity comparison):

me i. of the nine "provinces" studied, two behave vertically and seven horizontally, with probably profound impact on any policy recommendations and our understanding of the relevant societies; the vertical "provinces" resemble immigrant groups;

me ii. females lead men in the eagerness to forget the mother tongue, with the exception of Northwesterners in 1961, noticeable because the exception recalls the rural Ukrainians in the same census;

me iii. there is a well established pecking order in the progress made by the provinces on their way towards forgetting the Amerindian & Inuit mother tongues: Ontario will be there first, possibly beaten by Yukon and BC because they follow unpredictable adult losses of the vertical model of forgetting, and NWT last;

me iv. there are several, peculiar points the clarification of which would enlighten our understanding of the scene: the value of P^{rp} for Amerindians in Alberta in 1961 above 1.0; the Quebec age selectivity in 1971 obverse to that of Yukon and BC; except for NWT, substantial proportions (15 percentage points) of grown-ups lose their mother tongue while grown-ups.

The use of the two indices "survival probability" (P^rP) and "remaining years to live" ($\mathring{e}y^l$) suggested five conclusions marked mm for <u>m</u>other tongue-<u>m</u>other tongue comparison):

mm i. contrary to expectations, the losses in the immediate past are more severe than in the more distant past;

mm ii. however, conclusion mm i may be affected to a critical degree by the suspension of imputations in 1976 (18) and/or there may be a methodological consideration still to be unearthed;

mm iii. in provinces where the suspension of imputations can possibly be ignored more than in others, there seems to be no age selectivity in language losses apart from the two vertical cases noted in me i.;

mm iv. the pecking order on the basis of the mm comparison is somewhat different than on the basis of the me comparison; the notable difference is Quebec; it has longest expectancy of language survival on the basis of the 1961-71 mm experience against the sixth place on the basis of me retention probabilities in 1961 alone; the 1971-76 mm experience brings Saskatchewan to the first place (no non-responses?) and NWT to the last (imputations again?);

mm v. provinces that were doing better in the recent past than in the more distant past were all provinces that were doing so very badly in the more distant past (Quebec, Ontario, BC, Yukon, in 1961 only: Atlantic), that they did not have much room to fall further; in other words, the previous laggards in assimilation are catching up (Manitoba, Saskatchewan, Alberta, NWT, in 1971 only: Atlantic), but in any case everybody marches fast towards linguistic assimilation.

16. <u>The future of multiculturalism without multilingualism</u>

Should the indices presented in this paper be taken seriously then we could suggest exact years when the last persons, on the average, with the ability to speak Amerindian & Inuit languages will disappear in Canada. At the national level, taking males only into account, and on the basis of the 1971-76 experience this will be in nine years counting from 1976, that is in 1985; on the basis of the 1961-71 experience it will be in 19 years counting from 1971, that is in 1990. We cannot say how far the speeding up by 5 years is a real phenomenon and how far it is an artifact of the suspension of imputation.

The national average hides provincial variations. If the 1971-76 experience is to be taken seriously, then NWT will go even faster than Yukon and BC, while Ontario will go last, but even then the sturdiest age groups in Ontario will take only 15 years. If 1961-71 is to be taken seriously then

BC will go first and Quebec and Atlantic provinces last. Obviously the suspension of imputations was more than the robustness of our formula for $\mathring{e}y^{l}$ could stand. The formula for $\mathring{e}y^{s}$ gives steadier results and the fact that the data are older and refer to 1971 at their most recent is probably not much of a disadvantage. The data are consistent internally and all summaries from $\mathring{e}y^{s}$ point to a short lived span of survival: 15 years for most age groups in most provinces counting from 1971, that is until 1986, with a record of 24 for NWT, that is until 1995. However, even with the consistent $\mathring{e}y^{s}$ Amerindians of Manitoba and Saskatchewan lost respectively in the ten years between 1961 and 1971 23 and 18 years in the expectancy to survive speaking Amerindian languages.

The strict application of our formulae is probably unjustifiably ruthless because there might always be a hard core that will survive longer and beyond the distribution around the average. The existence of the hard core and its eventual effectiveness is tied up with age selectivity. It might be more realistic to follow the movement of curves on figures 43 and 44 or between 37 and 38 than to consider the arithmetic natures of $\mathring{e}y^{l}$ and $\mathring{e}y^{s}$. If the 0.2 loss in P^{rp} is taken seriously over 10 years then Ontario will be gone by 1991, with Quebec, BC and Yukon; Saskatchewan, Alberta, and Manitoba by 2001 and NWT by 2011. But NWT shows on figure 43 losses smaller than 0.2 in P^{rp}, in fact less than 0.1, so that if we can forget the disaster looming within P^{sp} (the imputations again!), the Amerindians & Inuit of NWT might survive linguistically until 2051.

However, the population base for even the bigger among the Amerindian & Inuit languages is small, and much of it is going before our very eyes. What is the minimum critical mass for a language to survive under what conditions of cultural aggressiveness (schools, publications, theatre, radio and TV programmes)? What will happen if the languages are gone and multilingualism comes to an end? Two developments can be hypothesized. The wool before the eyes of the English majority drawing away their attention from bilingualism will disappear and they will be left to stare alone into the face of the French fact with unforeseeable constitutional and societal consequences. Secondly, multiculturalism will have to fall back on other realities than languages. These realities can be newsworthy, melpomean, terpsychorean, culinary, possibly religious, tied to festivities, rites of passage, and seasons of the year. Deprived of the strength and nobility of an "own" language they will acquire the unreality and actual improbity of Klondike days in Edmonton and the Stampede in Calgary. Without the loftiness, nay, majesty of ethnic languages the society will be left to share its future with undiluted racism.

But how a language can be preserved and reactivated is another story. There are historical examples to go by.

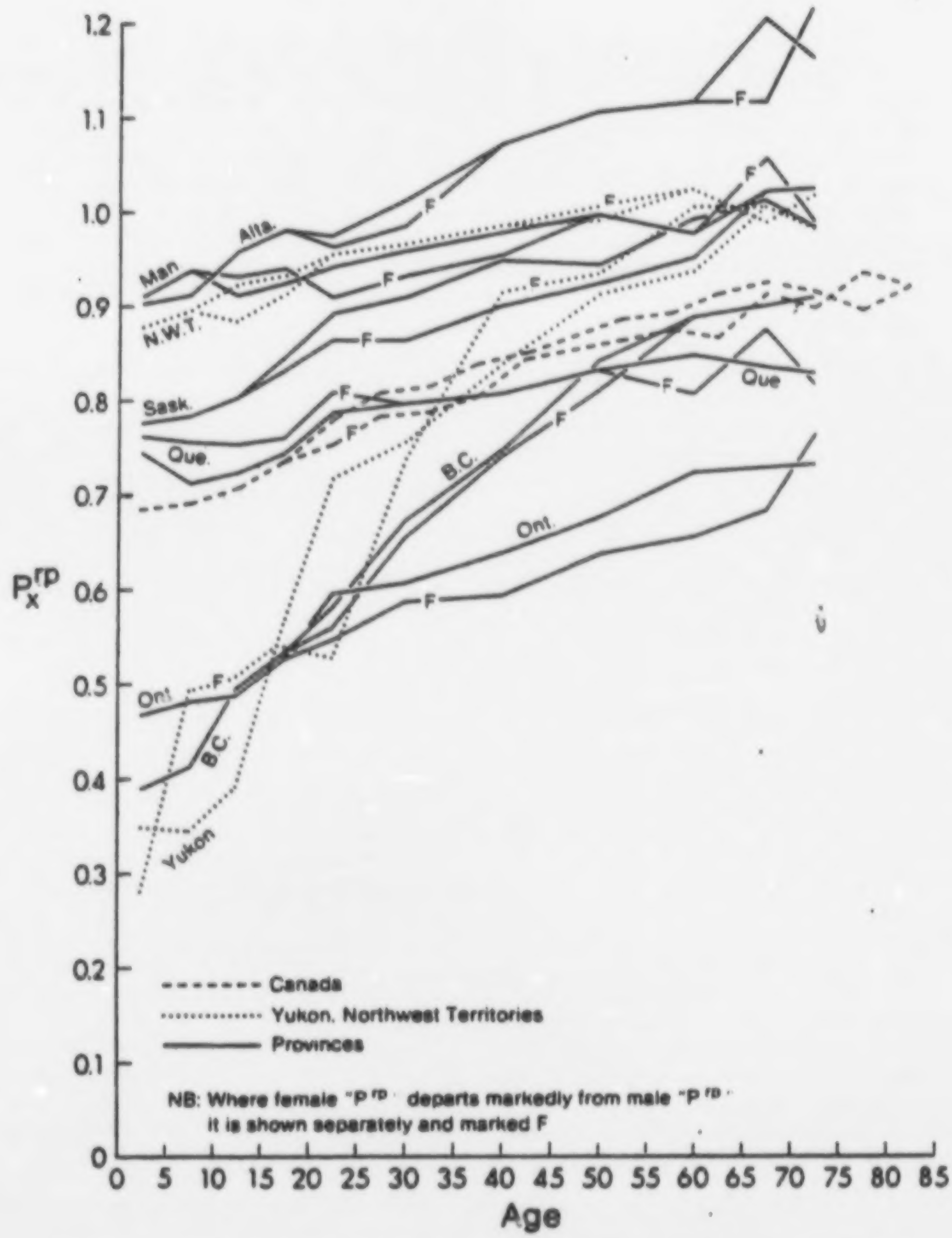

Figure 37. "Retention probability" of mother tongue by Amerindians & Inuits, Canada and selected provinces, 1961

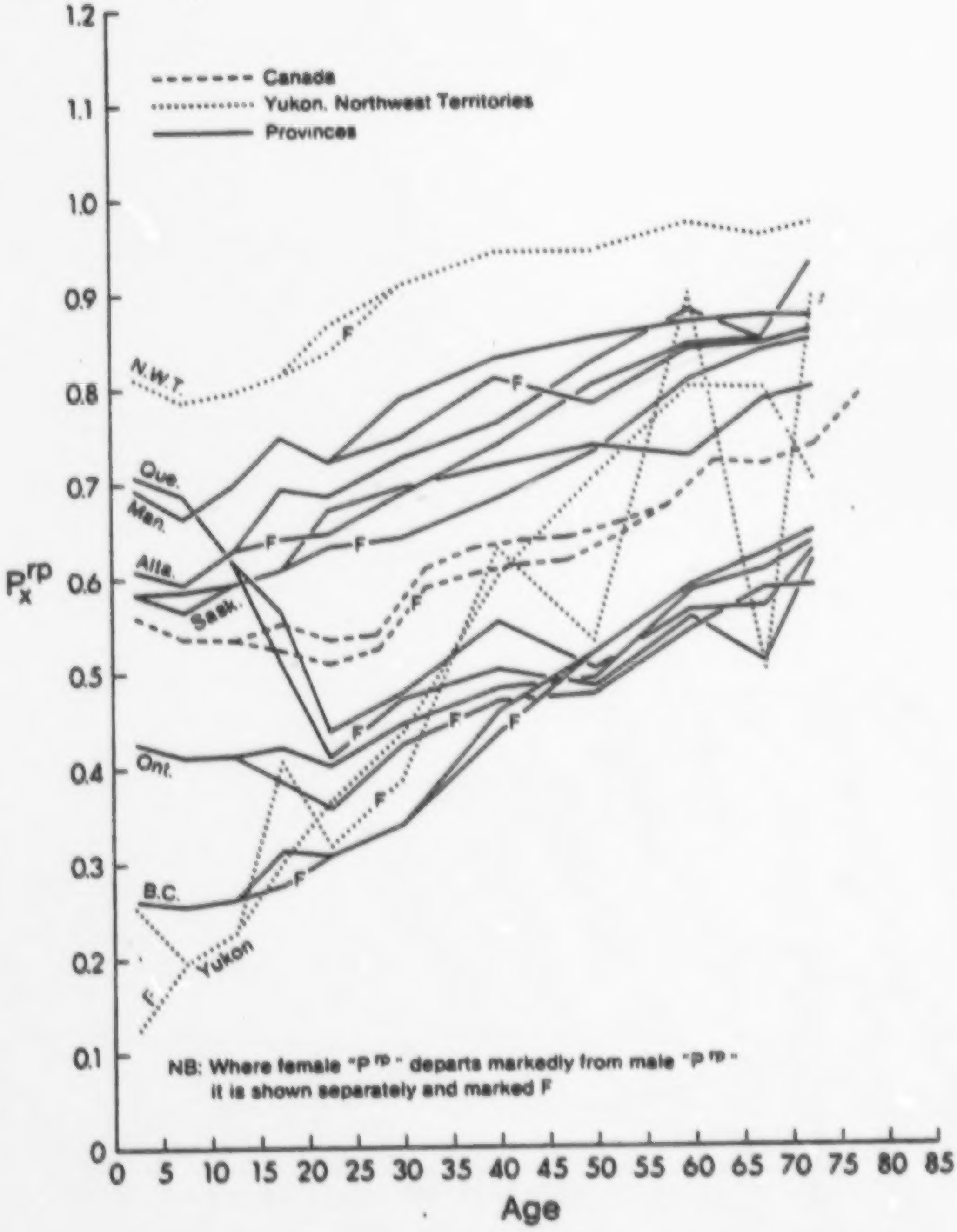

Figure 38. "Retention probability" of mother tongue by Amerindians & Inuits, Canada and selected provinces, 1971

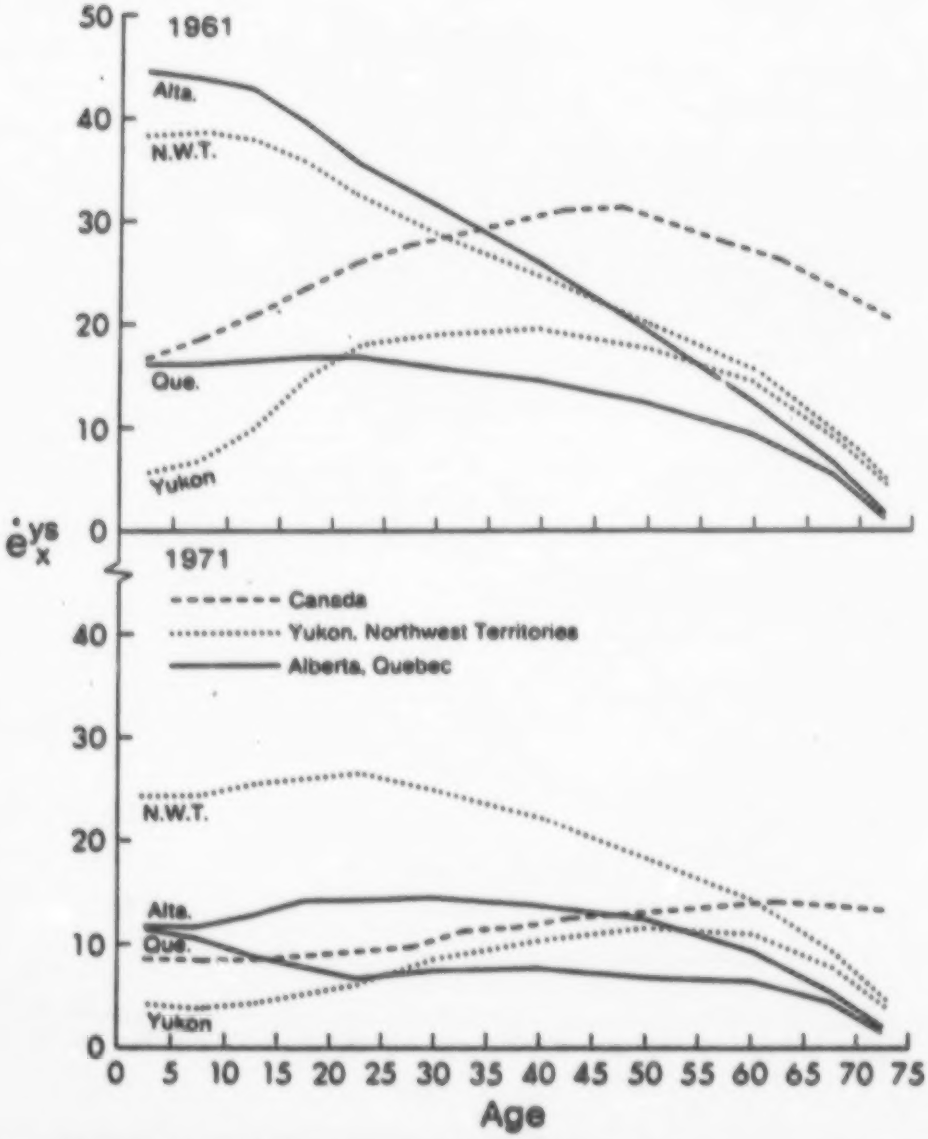

Figure 39. "Remaining years to speak" by Amerindians & Inuits; Canada, Alberta, Quebec, Yukon, Northwest Territories, 1961 & 1971 (males)

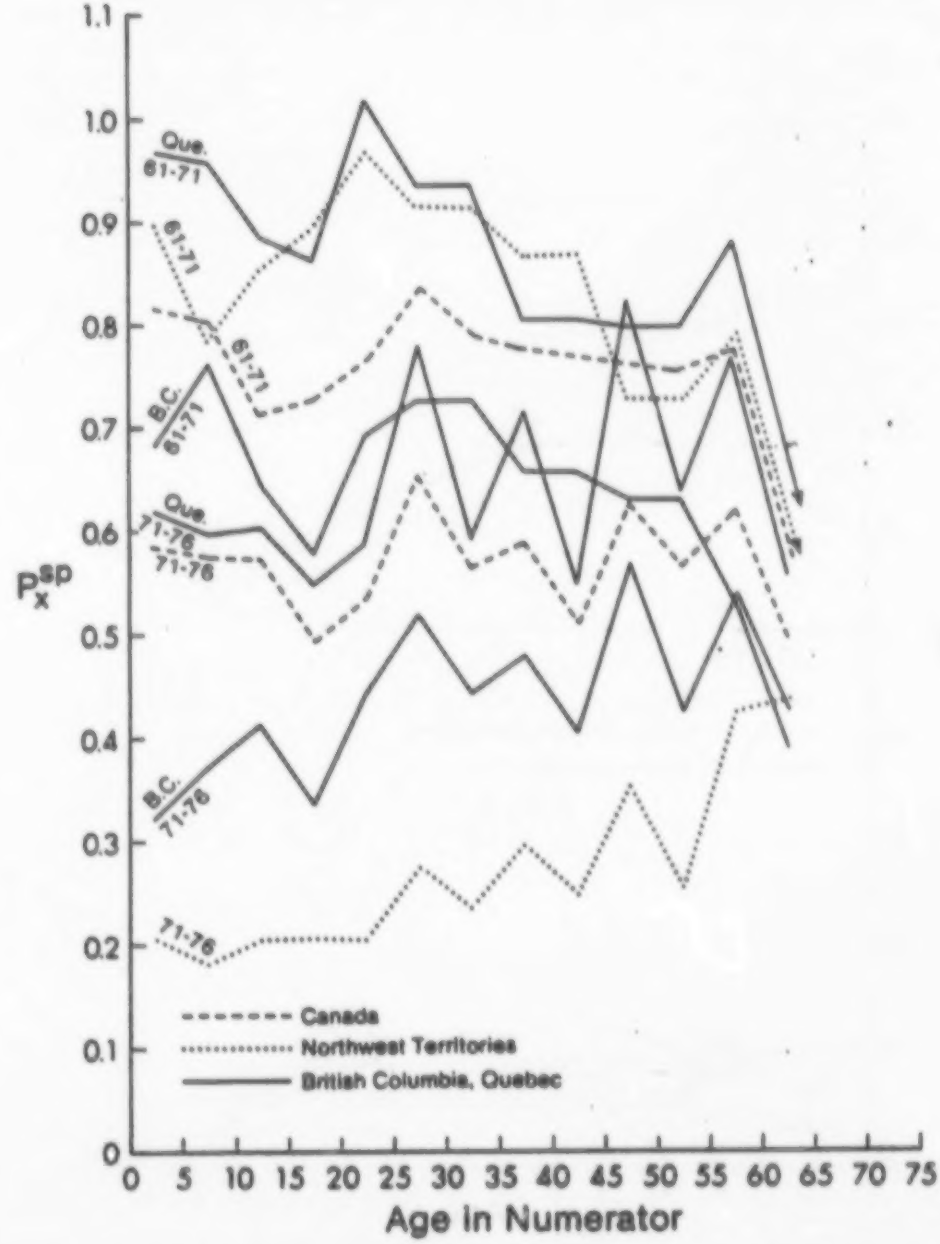

Figure 41. "Survival probability" of mother tongue by Amerindins & Inuits: Canada, Quebec, Northwest Territories, 1961-71 & 1971-76 (males)

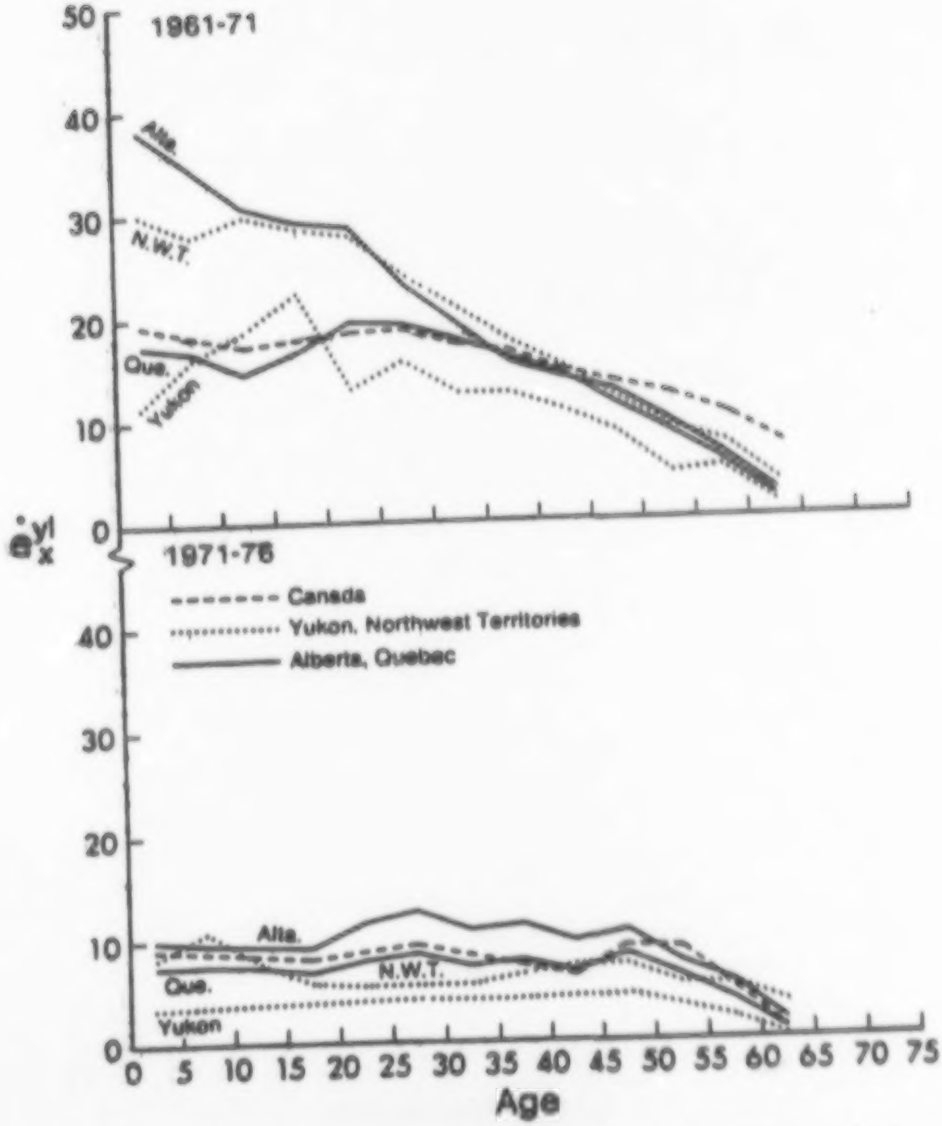

Figure 42. "Remaining years to live" by Amerindians & Inuits: Canada, Alberta, Quebec, Yukon, Northwest Territories, 1961-71 & 1971-76 (males)

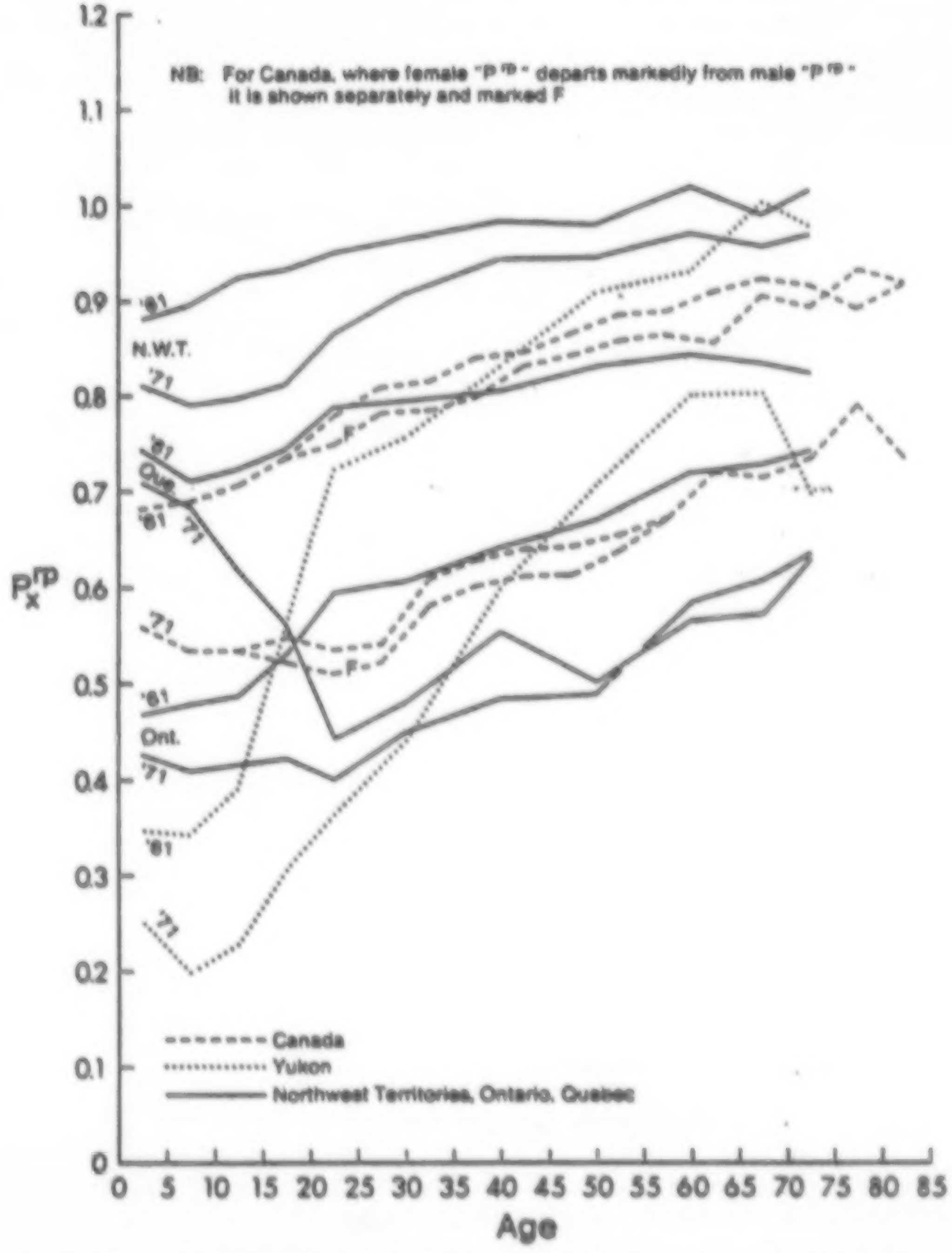

Figure 43. "Retention probability" of mother tongue by Amerindians & Inuits; Quebec, Ontario, Yukon, Northwest Territories, 1981 & 1971 (males)

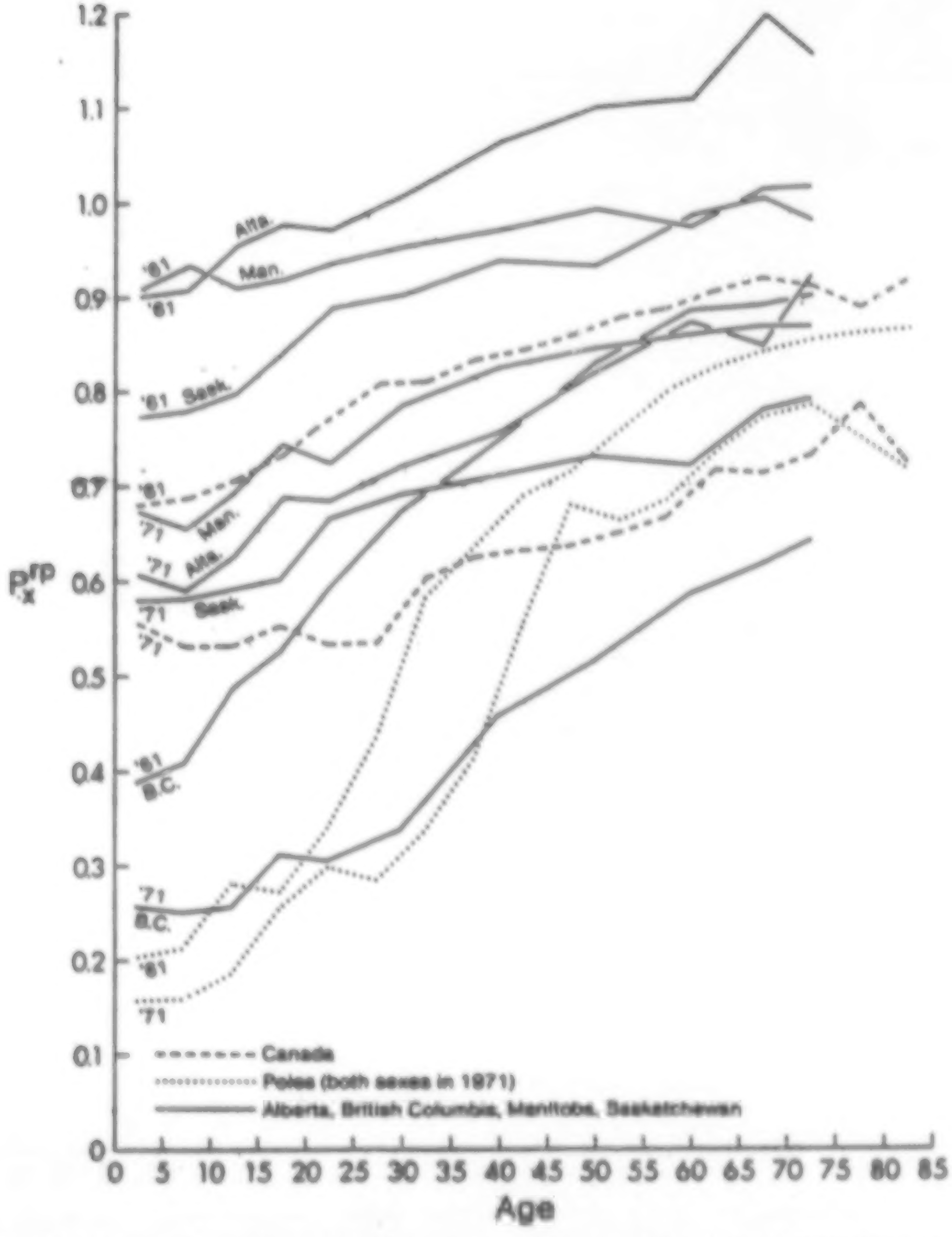

Figure 44. "Retention probability" of mother tongue by Amerindians & Inuits; Alberta, British Columbia, Manitoba, Saskatchewan, 1961 & 1971 (males)

Appendix: examples of the tabular base for the analytic figures

Mother tongue retention by the ethnic group of Amerindians & Inuit as reported during the population censuses of Canada in 1961 and 1971 for the four Atlantic provinces together

Table 5: "Retention probability", akin to life table ${}_5P_x$, probability of survival from age x to age x + 5

Table 6: "Remaining years to speak" akin to life table $\mathring{e}_x$, life expectancy at age x

Age X	Table 5 male 1961	Table 5 male 1971	Table 5 female 1961	Table 5 female 1971	Table 6 male 1961	Table 6 male 1971	Table 6 female 1961	Table 6 female 1971
0	0.7463	0.6685	0.7677	0.6798	18.60	12.53	18.95	11.74
5	0.7504	0.6687	0.7450	0.6265	19.07	12.51	18.92	11.09
10	0.7624	0.7293	0.7480	0.6929	19.58	12.47	19.55	11.21
15	0.8039	0.6241	0.7735	0.5913	19.91	11.17	20.29	10.07
	******	******	******	******	*****	*****	*****	*****

Sources: derived from: 1961 mother tongue - bulletin 1.3-5, table 95
ethnic group 1.3-2, table 81
1971 mother tongue - 1.4-5, table 10
ethnic group 1.4-3, table 4

Mother tongue retention by the Amerindian & Inuit mother tongue speakers between the population censuses of Canada of 1961, 1971 and 1976 for the province of Quebec

Table 11: "Survival probability", akin to life table ${}_5P_x$, probability of survival from age x to age x + 5

Table 12: "Remaining years to live", akin to life table $\mathring{e}_x$, life expectancy at age x

Age X	Table 11 male 61-71	Table 11 male 71-76	Table 11 female 61-71	Table 11 female 71-76	Table 12 male 61-71	Table 12 male 71-76	Table 12 female 61-71	Table 12 female 71-76
0	0.9679	0.6190	0.9476	0.6385	38.20	10.06	34.40	10.12
5	0.9568	0.5981	0.3175	0.5902	34.38	9.71	31.16	9.44
10	0.8871	0.6015	0.8227	0.5709	30.82	9.56	28.07	9.26
15	0.8617	0.5481	0.8540	0.5441	29.43	9.24	28.58	9.35
20	1.0264	0.5879	0.9985	0.5716	28.75	11.43	28.04	10.10
	******	******	******	******	*****	*****	*****	*****

***** = calculations continued until old ages (60 plus to 75 plus) depending on the availability of data; copies available from the author.

Source: derived from: 1961 bulletin 1.37-5, table 95
1971 bulletin 1.4-5, table 10
1976 bulletin 8 SD 2, table 1

ENDNOTES

*Computations for this exercise were carried out by Ruth Fortes, a graduate student in sociology, University of Alberta, and Ana Maria de Fantino, a graduate student in educational psychology. An analysis of some immigrant ethnic groups has been presented to a panel on "Language Loyalty: Problem of Language Maintenance among Central and East European Groups", Session 34, during the Second Banff Conference on Central and East European Studies, Banff, Alberta, March 2-5, 1978. It appeared since as a conference paper (Krótki 1978).

1. The reason for the statistical disappearance of the Metis, is the strict application of the Canadian definition of ethnicity: the membership of an ethnic group traced through the father's ancestors right to the time of their first arrival on the North American continent (through the mother in the case of Indians). Such a definition allows no mixed ancestry.

2. The proportion aged less than 15 years is over 48 per cent. There are few populations in the world with a young proportion reliably reported that high.

3. The tendency for wild statements with regard to Metis is a pastime followed by many. In one of the earlier suggestions that there could be as many as 600,000 of them, 90,000 were allotted to the Prairie provinces, the rest spread over other provinces, "with Quebec having the largest proportion" (Frideres 1974:12). In fact, among the 35,000 reported by the 1941 census only 1,500 were located in Quebec.

4. It will be interesting to see, how many Canadians will respond to the possibility to be opened by the 1981 census of having four categories: Inuit, registered Indians, nonregistered Indians, and Metis.

5. One writer who looked more closely into the new type of data concluded that in their aggregate form they do not tell us much more than mother tongue always did (Joy 1977). Another writer on the other hand was able to draw far-reaching conclusions for Quebec from these data: except for a restricted area around Quebec city and Trois-Rivières spreading a bit north and a bit to the Lower St. Lawrence, French is in retreat even in Quebec (Castonguay 1977:65; also 1974:128). The same writer used to a dramatic effect the differences between mother tongue and language spoken at home to show the losses of francophones, the greater the further away they are from Quebec (Castonguay 1976:346).

6. The reader would be wrong to conclude that the story is intended to discourage the use of census data. They are more reliable and have greater validity than most data about the society, including much economic data, many accounting data, and maybe the reader's bank book. The point is that the issue is not simple and requires considerable time and intellectual inputs. For another discussion of the census problems in measuring bilinguality see Lieberson in Kelly 1969:290-293. For the Canadian definition of ethnicity see Ryder 1955 and Krótki 1965.

E N D N O T E S (cont'd)

7. After decades of sniping at ethnic origin social scientists achieved eventually the cancellation, or at least suspension, of this characteristic in the 1976 census. It is clear that any number of rude things could be said about ethnic origin, and particularly its Canadian definition. Nevertheless it was a very useful variable, while it was available. It gave insights into the Canadian society and often broke it up into significant groups with marked differentials. It also provided a long series of comparability. Social scientists dealing with Canadian society will come to regret its absence in 1976.

8. The combined Atlantic curve is not shown on figure 37. It would have fallen somewhere between Saskatchewan and Quebec.

9. This typology between "national" and "ethnic group" behaviour is implied in the Canadian study (Krótki 1978) and a comparison of Canada and Alberta situations (Krótki 1980a). The French of Quebec, the French of Alberta and one or two other provinces, the early Ukrainians of Alberta and one or two other provinces behave like "nations". The urban Poles, the Scandinavians everywhere behave like "ethnic groups".

10. Alternatively, the ratio P^{rp} in ages over 30 in Alberta being more than unity, could be due to non responses at these ages being higher for the ethnic group than for the mother tongue, assuming that any imputation system in 1961 was impotent in that respect.

11. Why would the Amerindians (no Inuit here) of Alberta show such a sudden and pronounced eagerness to assimilate with the language of the majority, so very much more pronounced than in other provinces? There was no OPEC inspired oil impact prior to 1971.

12. Immigrant ethnic groups, other than Poles, show in the works cited (Krótki 1978; Krótki 1980a; Krótki 1980b) much larger losses than Poles: if ten years between 1961 and 1971 is normal, then Ukrainians lose 15 years and Scandinavians 25.

13. Let it be repeated again that the Amerindians & Inuit of Yukon and BC show language loyalties similar to most immigrant groups in other provinces, except the French in Quebec, the French in some other provinces, and the rural Ukrainians in some provinces.

14. The index P^{sp} is offered with lesser confidence than the others. Its somewhat anarchic behaviour (the violent age selectivity and iterations between some ages and in some provinces) is not yet completely understood.

15. There is a similarity between the overall differences in the curves for 1961 and 1971 on figures 43 and 44 ("and" this time, not "or" as in the text), and the two national curves for 1961-71 and 1971-76 in figure 41, both differences being about 0.2

E N D N O T E S (cont'd)

This similarity is deceptive at the national level and in fact does not arise at an intraprovincial level. There is, of course, no reason in logic or in the formulae of sections 5 through 8 why the two pairs of indices (one pair based on ethnic origins and mother tongues at the same census, and one pair based on mother tongue at two subsequent censuses) should behave the same, or even similarly.

16. It has long been known in demographic analysis with uncertain data, that some of the trouble can be avoided through cumulation (undertaken here for the purpose of index $\tilde{e}y^1$). For an early example of this recommendation see UN Pop. St. No. 42, p. 23.

17. It is beyond the bounds of one paper to attempt to assess how much of the poor showing in the lower part of figure 42 is due to losses arising out of the suspension of imputation during the treatment of the 1976 census questionnaires.

18. A claim arises out of this paper for a consideration in the allotment of priorities in the census programme of Statistics Canada: to revert to the trouble and expense of allocating, as far as possible, to the most appropriate mother tongue, the 445,000 nonrespondents of 1976 and whatever will be the number in 1981. Leaving them unallocated leads inevitably to a proportionate distribution, which we know is the worst alternative (Castonguay 1978). Even if Statistics Canada procedures appear arbitrary to the uninitiated, they are better than whatever academic social scientists can design (provided Statistics Canada can also find money to keep "diaries" of the allocations and whatever imputations they might be engaging in). We thus disagree fundamentally with the view that Canadian social sciences are better off with nonrespondents (Lamy 1977b) and even less with the more flippant rendition of the same view (Lamy 1978). Sure, if the process of imputations can be improved, as it can by keeping "diaries", then it should be. But to give up imputations is a retrograde step, which can be justified only in dire financial circumstances.

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"Aspects de la géographie du peuplement Inuit dans la zone frontière Québec/Territoires du Nord-Ouest"

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Université Laval
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Lorsque Monsieur de la Barre m'a invité à venir présenter une communication à ce colloque, il m'a demandé à ce que ce soit donné d'une façon non formelle. C'est ce que j'ai l'intention de faire d'autant plus qu'il s'agit, dans le cas présent, d'un projet spécifique; ce n'est pas un programme de recherche d'un organisme mais un projet très particulier et qui est d'ailleurs d'envergure modeste. Donc, je ne vous parlerai pas très longtemps, tout au plus cinq ou dix minutes, à moins que vous ayez beaucoup de questions à me poser par la suite.

D'abord cette recherche sur le peuplement inuit dans la zone frontière Québec/Territoires du Nord-Ouest, découle d'une proposition que le Centre d'Etudes Nordiques de l'Université Laval - où je suis chercheur - a faite au Ministère des Affaires indiennes et du Nord, Division de la recherche sociale nordique, dirigée par Monsieur Savoie ici présent. Notre proposition fut acceptée ce qui permit au Centre d'obtenir un peu d'argent pour faire la recherche.

Je voudrais commencer par vous énumérer les principaux objectifs qui font l'objet de cette recherche. D'abord, il s'agit d'essayer de montrer la répartition du peuplement inuit dans le Québec arctique et plus particulièrement dans la zone frontière Québec/Territoires du Nord-Ouest, et tenter de tracer l'évolution de ce peuplement dans l'espace et le temps au cours de la période historique.

Deuxièmement, nous voulons essayer d'analyser les mouvements migratoires. Cet aspect n'avait pas été prévu au début mais les organismes inuit du Nord nous ont recommandé d'agrandir un peu le domaine de notre recherche et c'est ce que l'on a fait. Il s'agit donc d'analyser les mouvements migratoires à travers la péninsule de l'Ungava, le secteur particulier de la rivière Payne, du lac Payne, ainsi que certains secteurs dans la zone sub-arctique; tenter de faire des projections des anciens peuplements inuit dans la basse rivière Caniapiscau et dans la basse rivière Georges.

Un autre objectif de notre recherche est d'essayer de se fixer les aires d'habitats et de chasse des inuit depuis le début de la période historique jusqu'à nos jours, mais d'une façon rapide. Il est évident

qu'avec les moyens mis à notre disposition, on ne peut se permettre de faire des études systématiques en particulier quand il s'agit de relevés sur le terrain. On utilise essentiellement les sources existantes.

Un autre objectif de l'étude du projet - je ne m'en occupe pas personnellement mais je m'y intéresse depuis le début des années 60, j'ai d'ailleurs écrit des choses là-dessus à l'époque - c'est d'essayer de décrire ce que j'appelle la symbiose liologique le long de la frontière Québec/Territoires du Nord-Ouest. Je pense ici tout particulièrement aux facteurs qui ressortent de la géographie physique, le caractère insulaire de ces espaces-là, la topographie des littoraux, leur position, leur concentration selon les moments de l'année; les différentes caractéristiques des glaces marines et leur position, ainsi que la répartition des ressources fauniques. Evidemment là-dessus, on utilise les travaux des biologistes. Je ne suis pas biologiste, je suis géographe. Alors on utilise les travaux existants. C'est donc une préoccupation que l'on a dans cette étude d'essayer de voir ce qui s'appelle la symbiose, la relations qu'il y a entre la terre ferme au Québec et les espaces maritimes des Territoires du Nord-Ouest, y compris les îles qui sont proches du littoral, le long de la côte du Québec et aussi les îles plus au large, périphériques, comme les îles Belcher, Mansel, Nottingham, l'île Charles, l'île Akpatok, etc.

Enfin, le dernier objectif principal que nous avons à l'esprit dans la réalisation de ce projet, c'est d'analyser les répercussions des politiques gouvernementales sur la répartition du peuplement surtout depuis les années 50. Il y en a eu des répercussions importantes. Par exemple, on a eu des regroupements de population pour des fins administratives - dans le Nord du Québec, c'est très marqué après la dernière guerre. Il y a eu aussi des projets de relocalisation, de nouveaux villages ont été créés ou recréés, parfois sous l'influence des administrations gouvernementales, parfois indépendamment. Finalement, il y a eu la Convention de la Baie James et du Nord québécois avec le découpage territorial qu'elle indique et qui fait l'objet de nos préoccupations.

Alors, dans l'ensemble, les deux domaines qui nous intéressent sont les domaines spaciaux et les domaines maritimes, à partir de la frontière Québec/Territoires du Nord-Ouest, qui est la ligne des basses eaux. C'est un domaine maritime de 82,000 milles carrés (210,000 kilomètres carrés environ). Sur la terre ferme, les espaces continentaux sont d'environ 120,000 milles carrés (à peu près 310,000 kilomètres carrés). Ce sont des espaces considérables à utiliser et comme je vais vous le dire, les données sont assez éparpillées, assez rares, et parfois inexistantes. C'est donc le domaine sur lequel on travaille.

Je voudrais vous faire part ici de l'état actuel de cette recherche qui a commencé au mois de juin 1978. Nous avons d'abord fait la cueillette des données, ce qui n'est pas tout-à-fait terminé. Même

lorsque l'on croira avoir terminé, il y en aura d'autres que l'on n'aura pas à notre disposition; on fonctionne à l'intérieur de contraintes budgétaires et on fait notre possible avec les moyens mis à notre disposition. Donc, cette cueillette s'est faite dans les bibliothèques et les centres de documentation universitaires, dans les fonds d'archives, à la Compagnie de la Baie d'Hudson à Ottawa, aux archives publiques à Ottawa ainsi qu'à Winnipeg. On a même obtenu des données de la maison Révillon & Frères, maison française dans le commerce des peaux de fourrure, établie à Paris et toujours prospère mais n'étant plus active au Nouveau-Québec. Nous croyons avoir obtenu le maximum avec les moyens mis à notre disposition. Il est évident que ce n'est pas exhaustif mais c'est le mieux que l'on a pu faire dans les circonstances.

Alors on pense qu'à la fin de l'automne 1980 et l'hiver 1981, on aura à la fois analysé les données recueillies, que l'on aura fait la mise en carte de ces données-là car l'aspect cartographique sera très important. Nous avons des géographes qui sont intéressés au plus haut point par les espaces géographiques. Finalement, il y aura un rapport final qui accompagnera les cartes. Ce rapport sera déposé à la Division de la recherche sociale nordique qui nous commandite.

La phase 2 qui consiste dans l'exécution de ce projet va commencer bientôt. Pour le moment, j'aimerais vous toucher un mot des problèmes que l'on a rencontrés jusqu'à présent. Il y a toujours des problèmes mais il y en a des particuliers dans ce cas-là. Etant donné que l'on commence au début de la période historique (début 17e siècle), alors les données pour les 17e, 18e et 19e siècles jusque vers la fin du 19e siècle, sont souvent inexistantes pour l'une ou l'autre des parties du territoire ou encore très rares, ou d'inégale valeur. Ainsi lors de nos travaux aux archives publiques à Ottawa, on a étudié des milliers de pages de documents et quelques dizaines, tout au plus, comportaient des données qui je pense, étaient reliées à nos préoccupations et avaient une certaine valeur. Ce travail de cueillette des données fut donc assez ardu et impliqua beaucoup de temps, un peu d'argent aussi, et des séjours à Ottawa lorsque l'on est québécois (rires...).

Nos difficultés découlent du nomadisme ou du semi-nomadisme des inuit durant la période que l'on a étudiée (surtout jusqu'après la deuxième guerre mondiale), ce qui rend les données fragmentaires, irrégulières et pas homogènes. Il est assez difficile d'avoir un tableau pour l'ensemble du territoire que l'on a étudié à une date précise, qui soit cohérent. Par exemple, il y avait de fréquents changements des sites de campements, vous le savez, et il y avait de longues périodes, parfois des années au cours desquelles, même au 19e siècle, les commerçants et les missionnaires ne savaient pas où était tel ou tel groupe d'inuit. Alors, c'est fragmentaire mais ça correspond à la réalité des choses.

En plus, des rapports non seulement sur la population ou la répartition du peuplement mais également sur la localisation des campements des groupes inuit, selon les informateurs, est très variable. Pour une même années ou une même période, le gérant du comptoir de la Baie d'Hudson donne des chiffres de localisation de campements et l'employé de Révillon & Frères, qui est son voisin, donne des chiffres différents. Les localisations seront différentes aussi car il arrivait parfois à cause des rivalités entre les deux compagnies, que les campements d'un groupe d'inuit qui étaient associés à Révillon & Frères ne pouvaient se faire connaître d'une compagnie rivale. Or, ce sont des choses comme ça qui rendent l'utilisation des données assez difficile.

Finalement, nous espérons que ce travail lorsqu'il sera terminé, pourra présenter une certaine utilité si jamais il devait y avoir au Nouveau-Québec des études comme celles qui furent réalisées dans les Territoires du Nord-Ouest sous la direction du Professeur Freeman, sur le but de l'utilisation et l'occupation du sol, de même que sur la Côte du Labrador. Or, sauf erreur, je pense que pour le Nord du Québec, ça n'existe pas encore sous cette forme là, et je pense que ce serait un élément de contribution utile pour un travail comme celui-ci.

Question:

Avez-vous consulté les archives des Frères Moraves?

B. Robitaille: Pas les Frères Moraves, car il y avait quand même des travaux assez fouillés, publiés sur la Côte du Labrador, où on avait exploité à fond les archives des Frères Moraves. Donc on ne l'a pas fait, mais dans le cas des missions catholiques, oui.

"The 1979 Northwest Territories Métis Census"

Barry Roberts

Consultant

I am here to say a few words about what is described on the agenda as the 1979 N.W.T. census. I suppose the first thing I should say is that it really isn't a census. I use the term simply because it has become the accepted description of the project - which is actually a survey - mainly through ignorance on the part of the media and various other people. A census, at least in my mind, is a count of population, a counting of heads and collection of other data. Our survey started out to be an enrolment in the context of land claims. An enrolment, again to me, is the placing of names and people on a list or a roll according to certain criteria which had been agreed upon beforehand. The difference, therefore, between an enrolment and a census to me is that one is dealing with a number, the other dealing very specifically with individuals.

Again the term enrolment is not very accurate in our case. Usually in the context of land claims an enrolment follows the signing of an agreement in principle between the negotiating parties, and in that agreement in principle are contained the criteria by which both parties agree to define those people who can be beneficiaries under the agreement. This was the case with the James Bay and Northern Quebec Agreement for instance. I believe it's the same with the COPE Agreement in Principle but the Métis of the N.W.T., in line with Métis everywhere, form something of a problem group in the sense that very often it's hard to define who or what a Métis is. In the case of the N.W.T. Métis, it was very hard for them to sit down and negotiate a land claim, as a group, when they didn't know who their group was. They didn't know who they represented. Even the association that was named to represent and negotiate on their behalf had no idea just what group of people they were talking about. So, following the enrolment principle, it was decided, against a lot of opposition from the federal government, that the Métis Association of the Northwest Territories should carry out a survey of the people of the N.W.T., largely of course in the MacKenzie Valley, and perform what is in effect a pre-enrolment.

So, we've cancelled census, we've cancelled enrolment and now we're down to a pre-enrolment in which the Association tried to guess what criteria would be acceptable to the federal government, and what criteria they could get to be accepted by the people who would be enrolled. If they could guess those criteria they could go ahead and carry out a survey and collect as much information as they needed to establish the eligibility of people to be included in any possible land claims agreement.

The criteria that the Association - I won't say has accepted because there is still room for argument, - which they arrived at over a great number of meetings in communities and boards of directors meetings and local meetings and workshops and so on, are basically that you are a Métis or a non-status Indian (the survey is supposed to cover both categories) if you are descended from one of the five Indian tribes of the Northwest Territories which they define as Cree, Chipewyan, Slavey, Dogrib or Loucheux, and that is the first criterion. You are a Métis of the N.W.T. if you are descended from one of those five tribes, and you were born in the Northwest Territories, or you have lived in the Northwest Territories for a certain period of time, or you are adopted by anyone who is eligible to be enrolled.

Most of those criteria raised absolutely no argument amongst the people themselves. The one area that has prevented them from reaching full agreement amongst themselves is on the question of residence. They reject in some ways the claim that people are N.W.T. Métis if they are the latecomers who came up from Alberta or Saskatchewan and so on, into places like Hay River or Fort Smith in fairly recent times. Most of that migration according to them, took place from about 1948 on, certainly after the war, and they have said amongst themselves that those people who came at that point either cannot be enrolled immediately or have to meet some residence qualification, be it 10 years, 15 years, 20 years, or 30 years. They have never yet been able to agree upon a figure. I think the current one talks about 1948 whereas an earlier one talked about 1964. There was even a 1977 in there at one time. But that is the only point of contention amongst themselves. That would also probably be a point of contention across the negotiating table; but the rest of the criteria are probably going to be reasonably acceptable within the terms of land claims negotiations.

Therefore, in 1977, the Association applied for loan funding from the Department of Indian and Northern Affairs and borrowed money against a possible claims settlement later on. They decided to carry out a survey of the communities of the MacKenzie and to find out who in fact the Métis and non-status people were and they also decided that this would be a matter of self-perception. A questionnaire was designed which asks all of the information of a preliminary nature that would be needed to establish names on an enrolment list and covers the residence doubt by asking for the beginning year of residence in the Northwest Territories. They then proceeded through a house-to-house personal

interview field survey to approach - for the most part - those people who were known not to be treaty or registered Indians. I think that's probably the best way to put it. It was certainly not a house-to-house survey in the sense that every house was visited and as soon as the door was slammed or someone said "No, I'm a registered Indian" they turned away.

They were able to work in the communities to find out who was considered to be in the Métis or non-status category, they approached each household on the assumption that if the head of the family had agreed to fill in the questionnaire he had some perception of himself and his family as Métis and not status. The question of whether a family was Dene or not was never included, largely because of the political situation particularly at the time. The question, "Are you a Dené or a Métis?" would have been perceived immediately by the Indian Brotherhood as it was then, as a Métis raiding party out to seduce every possible vote they could get towards a land claim and therefore the question was avoided.

The survey went out through all of the communities in the summer of 1977 asking a number of questions. It asks for names, an address, the marital status, the sex, date of birth, and an identifying number. We asked actually for both a health care number and a social insurance number. And, we asked the question, "Were you born in the Northwest Territories or in what year did you first take up residence?"

The survey was remarkably successful, from our point of view, in most of the smaller communities where it was quite easy to do. It was not so successful in some of the larger ones, especially in Yellowknife, where we have discovered since that there is a fairly fluid Métis population and where, because many of them are transients and it's a large place, you don't have the kind of community knowledge that you do have in the others. You can't go to the Métis local, for instance, and say "Who are the Métis families?" whereas you might be able to say that in Macpherson or Simpson or somewhere else. So that we've had difficulties there.

However, by the end of 1977 or the beginning of 1978, the returns were in for all of the communities. One of the supplementary questions on the questionnaire was to ask for the names and addresses of those relatives, friends and other people known to them who were no longer living in the community, but had moved out into the provinces or elsewhere. So that from the returns that were made at that time a mailing survey also took place throughout the provinces, into the Yukon Territory, as far south as the U.S., as far east as Sweden I think, and the same questionnaire, which was self-explanatory, was sent out and a number of returns were received from families who had moved away but through their willingness to respond to the questionnaire were seen as accepting, for the purpose of land claims, the definition of Métis as it had been used.

The returns were processed clerically and then entered into a word processing system, the Micom 2000 with which some of you may be familiar. It was a fairly new machine at that time; it's getting to be very common now. It was chosen for several reasons. At that time, again in the context of the Métis-Dené political situation, there was a great deal of worry about one side learning of what the other had done. There were those who thought that if the government, I say government, not naming one or the other, were asked for computer time then there would be a loss of confidentiality. The use of word-processing equipment is, to me, recommendable in terms of a population or a group of under 10,000 because the processing can be done relatively simply right in the office of the survey, lists can be produced in a matter of days, print-outs can be had in a matter of minutes. Those print-outs can then be returned to the communities and used as a basis for checking by the fieldworkers and this is what we did.

Most of the processing was done by the spring of 1978 at which time certain developments which had nothing to do with the project, saw its termination or suspension and the lists, as they were prepared, were not used except internally by the Association. In June of this year, the Board of Directors of the Association asked that the survey be revived because of new concerns, partly land claims again, partly concerns such as the establishment of the Métis Development Corporation which sometime in the future may need a share register which would be based on the kind of lists that were prepared. It was decided therefore to resume the census and to take the opportunity to up-date it, to verify it where we could, and to finish the processing that had been suspended earlier.

The fieldwork took place in September and October of 1979. The expectation that some people had that we were going to find hundreds of thousands of extra people was not realized. We have added no more than about 200 people from the communities to the list which either suggests that we did a very good job last time or that we're doing an equally rotten job this time, I'm not quite sure which. It did prove of immense value in verification of the data. One of the things that may happen in a survey of this kind is that a great deal of error creeps in the ways of spelling of names and so on, partly because some of the respondents are not always that fluent in the written language. Our system procedure this time around was to begin with mailing a questionnaire which, because we had lists prepared in 1977 available, included a print-out, the form, of the listing for each household. The form was sent back by mail to the respondents asking them to look at the complete print-out of their particular household; verify the information or give us the corrections. Then in a second part, on the reverse side, we asked them to indicate the vital events that had taken place within that family since the 1977 survey: births, deaths, marriages. We also asked a question on adoptions.

I think the last figure I saw was about 60% completion on the actual numbers listed from the original survey. There are certainly two or three thousand corrections, many of them name changes, either name spellings altered or given names. There are some number changes, - birth dates and so on, most of these I suspect arising from typographical errors that weren't picked up the first time around.

What we have now is a series of lists - we call them community lists - I should have said this earlier - that are, if I can use the term, "responded families" of Métis or non-status people within a community, given by family groupings rather than alphabetically or some other way, so that the lists themselves are of use to the Association and to the locals of the Association. They make more sense as family and community lists than if we wanted to just pick out one alphabetical listings for instance.

The community lists are about 60% verified and up-dated. What remains to be done on the survey, which is timed to finish by January 31st 1980, is to gather the last 40% in the communities. That work is underway, partly by a follow-up visit by fieldworkers to certain of the communities. In the next two or three weeks, we hope to do a mail follow-up to those people who did not respond the first time and to get some response from them. The second pass around also asks for an up-date of the extra-territorial people - the people living out in the provinces - a good response has been received from those extra-territorial people who replied to the first questionnaire. Some have been returned as not deliverable - address unknown and so on. So we have gone back to the communities hoping to up-date the addresses, also hoping to up-date the other contexts that we have. We expect to be doing a mailing for that within the next two or three weeks.

Our original plan was to have a final publication of the list by December 31st, but that is now January 31st (1980) because of some delays and because it has become apparent to us that there is a fairly extensive movement of people taking place. We have lost track of a number of people, some of them have moved to other communities, some have moved south, some of the people who were already in the south have moved. We now realize that it's going to be a lot longer job to try to make contact with them. So the senior fieldworker from the survey has been taken on full-time by the Association as a census officer and will continue to work on the project at least through 1980. He will get the information that we're lacking and solve our other problem, which is one of up-dating. The problem with an enrolment list is that if you stop work then it immediately becomes out of date. There has to be some way of carrying out an up-dating procedure. Based on experience that we've had, it was decided that the only feasible way is to have someone sitting in the Association offices in Yellowknife - or travelling the communities, - but a good deal of the time will be spent sitting there, 'phoning people, bugging people in other words, to send in reports and up-dates from the various locals.

Our results to date may be open to question, but on the basis of our accepted criteria for what constitutes Métis and non-status Indians, we have been quite successful. I should make the point that on the questionnaire, there are a separate check boxes for Métis and non-status. Very few of the replies indicate non-status and it seems to be that the people themselves, certainly in response to our survey, are using the definition that we as a project were using. That is that you are a non-status Indian or you declare yourself as one, if you have lost your status. In other words a woman who was a registered Indian and has married a non-Indian or married a Métis will declare herself non-status because she has lost her status. If the person never was a registered Indian then the response has been, "I am a Métis", and those are the results as we have them.

To give you one or two very crude figures on the basis of our "registered population", if I can use that term, the completed questionnaires which have given us all or practically all of the data that we asked for, and have met our own criteria, have produced listings for 4,700 people, approximately. Of those, about 4,400 are in the Territories, about 300 or 350 are outside of the Territories. We have names and some but not all addresses for several hundred other people who have been referred to us by their relatives but have not been reached or have not replied. This suggests to us that within the context of land claims, the Métis enrolment figure is certainly going to be 6,000 and is probably going to be closer to 7,000.

The project is due to be finished by January 31st, and the original intention was that the lists would be published at that time. I cannot say if that is still the case - this is a decision to be made by the Association. I know that there is an agreement that the lists will certainly be provided to the federal government and like everyone else, I will have to wait until that time to see what the Association decides. And that is about it, I think.

Question: Regarding the self-perception approach to ethnic definition. When the categories are Métis and non-status as opposed to status, I think you would get the kinds of results you have described. Fashions may have changed. It may no longer be fashionable to be Dené, but I think it certainly would have been a few years ago. Had the categories been Métis versus Dené, forgetting status and non-status, the results might have been quite different. That's one observation.

Another is that I am not really sure but what these things are always a matter of self-perception. Non-status doesn't mean anybody having mixed ancestry because I think virtually all native people now have some mixed ancestry, except perhaps some Inuit. Maybe the rules have changed and we live in an era of more openness of definition, but I still think that we have got this problem of who these non-status people really are and the answer would depend greatly on what was "current" as a definition.

Answer: I am, on reflection, inclined to agree with much of what you say. I have tried to stress that our criteria of Métis - I'd rather use criteria, there is no definition - are based on the self-perception approach. I have said elsewhere that we followed what I call the New Zealand example. In New Zealand, over the last 150 years, you have this tremendous integration of the Maori and New Zealanders, if I can use that term, and their definition is that you are a Maori if you say you are a Maori and this is accepted in New Zealand. I don't know what else they could do. Certainly to prove that you are Maori would be very, very difficult in many cases. So we use that approach too. I think that to put this in the perspective of this particular workshop, we might say that what our enrolment figures or lists show, with reasonable accuracy now, is the people in the Northwest Territories of Indian ancestry who are not registered Indians. Unfortunately in many contexts you are only an Indian in this country if you are a registered Indian. It's very simple to go down to Indian Registrar's office and get either the figures or the lists for that. I did it just the other day and as of December 31st last there were 7,593 registered Indians in the Northwest Territories. Barring the fact that they missed a few which they invariably do, that is a reasonably accurate figure and is available to anyone. What has not been available to anyone is the number of other Indians or people of Indian ancestry in the Northwest Territories and I suggest to you that for the moment our survey is the first real indication of this number and what is far more important to me, a real indication of who the people are.

Question: I still think there is an element of artificiality in what you are doing. The term Dené is equivalent to the term Inuit. We have accepted Inuit. Fortunately, we never distinguished between status or non-status Eskimos.

Barry Roberts: But isn't that a question of perception too? Self-perception?

Question: Yes, up to a point. But the community may have other views.

Barry Roberts: Yes, you mention a very important point, one that I had to struggle with for a long time, you mentioned the community. What is the community in Yellowknife?

Question: OK, but if you take a small integrated community in the Valley, I don't think you could argue that the registered Indian would call himself a Dené, and his next door neighbour would call himself a Métis, not being registered. It just doesn't make sense.

Barry Roberts: As I said, in my experience up until recently they wouldn't have called themselves either. I have been at many, many meetings where I have heard people say, "Look, there is no distinction between us - we are all native people" - they didn't use the word Dené. I have been at many meetings where I have heard Métis or non-status people say, "We are not Dené". I am sure you have been at meetings where somebody said, "We are all Dené" but I think it's something that we cannot solve and as I said we stayed away from it deliberately because otherwise we could have gone around throwing sticks of dynamite - it would have had the same effect.

Question: I think that what has happened here is that ethnic categories are being determined by what is politically current. I think that the reason the Métis Association is doing what it is doing is that they want to get the best possible land claims settlement they can, they want the largest enrolment.

Barry Roberts: No, I'm sorry, I have to reject that. It is almost a slur on them and me and on everybody else connected with the project. This was not a political plot to go out and get the largest numbers we could - the questionnaire asked a question - it was put to people very, very carefully, because particularly in 1977, every move that was made was followed by a Dené. Right? The Dené themselves, if I can use that word, a terrible, loose word as far as I am concerned, themselves were out registering people.

Question: Their motives were quite political as well, they wanted the maximum enrolment they could get.

Barry Roberts: Yes, the point I am trying to answer though is the fact that this survey did not go out to get as many numbers as we could find. We simply did not do that. It went to every known native family that was known not to be registered as treaty Indians and asked if they were willing to fill out a questionnaire. Now that is all I can say. The motives for them doing that are open to question. There are some who responded because they genuinely perceived themselves to be Métis. There are some who responded because they had lost their status and defined themselves as non-status Indians. There were probably a good number who thought, "We better get in on this because there may be a land claim". There are some families, fortunately very small, particularly in the MacKenzie Delta, who I know to be on three lists. They are Métis, they are Inuit if you want to use that term, although Eskimo is still perfectly valid, particularly in the western Arctic, or they are Dené, they are on all three lists and they have every right to be on all three lists.

Question: I grant that. But I think there are real categories in the MacKenzie Valley and think those real categories are Dené and Métis. Non-status, and status, refer to the Indian Act, not the experience of the people themselves. The words Métis and Dené have a cultural, linguistic and ethnic validity that non-status does not.

Question: (Karol Krotki)

These 6,000 Métis you expect, are in 1971 the non-Inuit people who were enumerated as being 8,000 Indians, and 12,000 "other". By '81 there would be say, just to set figures, 10,000 Indians and 14,000 "other". The 6,000, would they come out of the 10,000 or out of the 14,000 or a mixture?

Barry Roberts: I would think most of them would come out of the "other" category. The one very careful thing that was done here, I don't make any pretentious claims about science or anything, but the one very careful thing is that as far as we know there is no registered Indian on this list. Whenever they are found - and checks are made, some people register through ignorance, they don't know really what's going on, - everyone of those has been removed.

Question: But what about cases where Indians are described as such in the census by error?

Barry Roberts: Yes, so there will be a mixture. Yes, that is true. As I see it the definitions that are quite often used are so loose, that if the question is asked, if it's asked and sometimes I suspect it isn't even asked but perceived at the door by the census taker, you are Indian if you look Indian, - so I suspect that some of, put it our way, if the projection which I think is for 8100 by '78, and the registered band list for that period gives 7500 or 7600, there is obviously a group of people who are Indian but are not registered Indians so that they would presumably fall within our group. There would be a lot of people, I would suspect, particularly as far back as '71, who would have fallen into the other group as white people. They would not have been as willing to be seen as Métis as they are today. There has been a fair change in attitude over the last few years, there is more acceptance on the part of many people of their Indian-ness than there was at that time.

Rapporteur

Robert Reid

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This is the first time I've ever acted as a rapporteur and I was wondering what my function was. At the start of the day I thought it might mean to summarize all the discussions that took place and I t^ok a number of notes. However I got caught up in my interest in the topics and I took ten pages of notes, instead of say 20, and when I look at these ten pages of notes I think of the comment made by the English poet, Robert Browning when he was asked the meaning of some of his verse: "When I wrote that God and I knew, now only God knows."

I think that in the discussions, there was a smorgasbord of goodies. There were the three government representatives who gave some interesting information about the work they are doing within their organizations and I believe all three indicated to you that they would be willing to assist you people as researchers to the extent that it was possible.

The other areas were a number of, what I, as an economist would call, micro studies. There was the discussion between the loss of a mother tongue vis-à-vis the number of people who claim native ethnicity, Professor Krotki, I found that extremely interesting. There was also that historical study presented by Mr. Robitaille, on the distribution of the Inuit in Northern Quebec and more precisely on the border of Quebec/Northwest Territories. There were Mr. Roberts' comments about the census of the Métis in the Northwest Territories. However the one thing that captured my attention was the comment that Professor Freeman made in his opening address. That comment was that the research is being used, and it's being used for policy purposes and for that reason, he said, - "The credibility of the scientist is dependent upon how others use his work." And I think that was a good thought with which we could terminate this session.

Second Theme / 2e thème

Participation of Native People and Other Northerners in Demographic Research

Participation des autochtones et autres résidents nordiques aux recherches démographiques

Chairperson / Présidente

Ginette Brulotte
Environment Canada
James Bay and Northern Quebec Office
Ste-Foy, Quebec

W. KEMP

General Chairman / Président du Colloque

We're ready to begin and as General Chairman I'll start out again today. As I mentioned yesterday the session today will change in character. We want to try to bring population studies out of the library to where they really matter which is in the field, where people are doing the real work that must be done in the North, whether that be described as high North or up North, wherever we find the North. As far as participants here are concerned that is where there are native populations, wherever they may reside. Today we want to work in a less formal manner. We want to see this session, especially this morning as a kind of less-structured arrangement. What we want to do is talk: people who have ideas or feelings or angers - we should try to bring those out and see just where we're going with all of this. Especially so because in the past, workshops have been taking us in directions where we're trying to understand some very large problems, focusing on certain kinds of population problems with respect to native people, - data problems, implications of population characteristics - but not yet getting down to the real grassroots. This is a first attempt to do that and so now Ginette would like to introduce the actual program for today.

Second Theme / 2e thème

Chairperson / Présidente

Ginette Brulotte

Our programme today has been designed to provide an oppórtunity for gaining the interest, cooperation and the participation of the native people and other northerners in demographic research in two ways. The first is by inviting native people, and other northerners, to comment on perceived demographic problems areas with respect to their communities or regions, and the second is by having researchers in turn identify the use to be made of quantitative demographic data and interpretive studies in relation to practical socio-economic problems and the benefits to be derived from such studies by the people in the North.

Some of the participants to this workshop might recall that this theme was also one of the Northern Population Workshop I, held in North Hatley in May 1976. During that session, one of the main comments made was that much research done in the North had been conducted without the "informed consent" of the community, for the benefit of the researcher himself or his client whether government bodies or private companies. Participants suggested that research to be carried out should be "judged by utilitarian rather than scientific criteria" * and that decisions on the research should be made jointly by the researchers and the communities involved.

Another participant at the first workshop, Don Whiteside, also stressed the importance of ethical problems in demographic research, classifying demographers into "good guys" and "bad guys". Mr. Whiteside said, "If the demographer is a "bad guy", he will not understand or care to understand the problems of native people. Information thus gathered could easily lead to policy changes which might negate or subvert their aims and objectives... If, on the other hand, the demographer is a "good guy", he will be sensitive to the needs of the people as well as sensitive to their fundamental goals, and will not act in any manner which will negate or subvert them."

This morning session of the second workshop is a direct answer to most demographers' preoccupation with being "good guys", as Mr. Whiteside puts it, or with working in close collaboration with native people and other northerners in planning and executing research in the North.

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*Howell, Nancy, quoted in Proceedings of the Northern Population Workshop I, p. 171, the Arctic Institute of North America, Calgary, 1977.

During my discussions with the participants in the preparation of this session, it appeared that their main concerns were twofold. On one hand, many native groups are concerned with the notion of ethnicity, mainly in regard to the whole question of land claims. Who is entitled to participate in a claim and to benefit from the settlement? In a more general way, who is a member of the population base when demographic research has to be done? Most of the native groups have faced or are now facing this problem. Yesterday we saw that Métis and non-status people in the Yukon and Northwest Territories are now addressing this question. Quebec Crees and Inuit have already dealt with the question. This is still a major preoccupation for the Council of Yukon Indians, the Ontario Metis and Non-Status Indians Association, l'Alliance Laurentienne des Métis et Indiens sans-statut du Québec. So I think that the question of ethnicity is one that will be discussed today.

On the other hand, most native groups are concerned with the very rapid demographic transition which is taking place in northern communities. The general pattern is similar, though it might have happened earlier or later depending on the community. To recall that general pattern, various factors (such as improved housing conditions, better health care services) were responsible, at the end of the fifties and beginning the sixties, for a clear decline in mortality while fertility stayed high. As a consequence, the population started to grow rapidly and the age pyramid accounted for a larger proportion of youths. Again, in recent years, a combination of factors (disappearance of the traditional way of life? change in economic activities? money economy? southern type of education?) brought another change to the demographic behavior of northern population, i.e. a decline in the fertility level. This has appeared since the beginning of the seventies.

Let me just cite a few figures. Between the 1951 and 1961 census, the Canadian Inuit population rose by 1.7% a year while during the following decade, it rose by 4.3% a year - a very large increase. According to National Health and Welfare Department Statistics, the crude birth rate in Northwest Territories was 48.6 per thousand in 1961 and 37.5 per thousand in 1971 when we see the beginning of a decline. In the eastern Arctic, this drop occurred somewhat later (from 60.0 per thousand in 1967 to 37 6 per thousand in 1971). A recent study, done by Andrew J. Siggner * showed that the Indian population birth rate in Canada dropped from 41.6 per thousand in 1966 to 28.5 per thousand in 1976. As a consequence of high fertility in the sixties, 42.1% of Canadian Indians were still under 15 years of age in 1976. So the pyramid was large at the base but with the decline in fertility, the pyramid is changing rapidly. These figures correspond to a national average; it must be noted that in northern and more isolated Indian communities, the fertility level was higher, the drop more recent and perhaps less acute and the proportion of those aged under 15 still close to 50% in more isolated communities.

Governments, as well as Native people themselves, are very much concerned with those dramatic changes because if they were brought in by various social, economic and cultural changes, they in turn will have numerous consequences on the very same socio-economic life in northern communities. One can think about a possible decline in the school-age population while, on the other hand, communities will be faced with a large number of youths entering the labour force. What would be the pressure on the harvesting activities? On the wage employment market? How many new families will be created? What needs will they generate ir term of housing and public services?

But first, what are exactly the demographic trends in northern communities? Which level will be attained? Will it be similar to the Canadian population in 10 or 15 years or will it stay higher than the Canadian population level? How long will the fertility decline last? To which level? Could migration modify the situation? So there are a lot of questions that are still unanswered. In some instances, the data base is not very good. I think that is one of the concerns of the Quebec Inuit who are still faced with the problem of the population data which is not up to date or accurate. As long as the data base is not established and updated regularly, it is very difficult to conduct demographic studies. It therefore appears that a good knowledge of the demographic situation and trends in northern communities is essential to a planning process of different activities in these communities. For instance, today Mr. François Vézina will explain how demographic information was used in the context of a relocation project for the Naskapi Indians, how the demographic projections were used to provide for housing and public services when planning the relocation of a community. Demographic information was also essential in term of the environmental and social impact assessment of the Nemaska band relocation project. The review panel on Nemaska has explained how demographic data could be used in planning.

The participation of native people in defining the demographic situation is essential because they know more than anybody else the reason for the present changes, the motivations for further change and they have their aims and objectives to put into context, as Mr. Whiteside has said. In turn, the demographers can help the communities to define the situation and to project future evolution by providing adequate methodologies and experience in analyzing statistical information.

I hope that the workshop will constitute a step towards better understanding and fruitful collaboration between northerners and researchers and I think both can benefit from such collaboration.

I think that I have put enough questions on the table to start this morning's discussion. I am sure that every one around this table has a lot to say about them and I will immediately pass the microphone to Mr. Bob Reid who will discuss "the notion of ethnicity and its bearing on the collection of demographic statistics".

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*Siggner, A.J., An overview of demographic, social and economic conditions among Canada's registered Indian Population, Research Branch, P.R.E., D.I.A.N.D., 1979.

"The notion of ethnicity and its bearing on the collection of demographic statistics"

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I kind of feel like a dinosaur who has realized that the land has taken over. I have prepared a short paper on the subject of ethnicity as it concerns the program of the Northern Economic Planning Commission of the Department of Indian Affairs and Northern Development which I will read. I hope it may be relevant to the problems you have suggested and faced by researchers in the field and the people who are affected. The title of the paper is "The Notion of Ethnicity and its Bearing on the Collection of Demographic Statistics".

As submitted to Parliament, the estimates of the Department of Indian Affairs and Northern Development state that purpose of expenditure on northern development is the advancement of "the social, cultural, political and economic development of the Yukon and Northwest Territories..." and specifically note that there is to be "special emphasis on the needs of native northerners".

Given this mandate and the planning, administrative and evaluative functions associated with it, it is important to have a reasonably good idea of how any people in the two northern territories are covered by the designation of "native northerner". But this requirement is more than a mere head count. What we are also looking for, is knowledge of those particular characteristics which identify the native people as a distinctive group within the total territorial population.

It will be apparent from my subsequent remarks, that we in the Northern Program are a good distance from achieving our goal. Yet, there has been some significant collection and compilation work done and these materials, when interpreted, provide an interesting first approximation for a statistical profile of the native peoples of the two territories. What I want to do in this talk is to make some general remarks about the notion of ethnicity and its bearing on the data sources available to us. I will then provide some statistical information which I hope, will provide the reason for the Northern Program having a mandate to place special emphasis on the needs of the native northerners. Lastly, I will close with some general observations about our requirements in the socio-demographic field.

I

The principal sources of quantitative information on the native peoples of the territories are the decennial censuses of Statistics Canada, and the manpower surveys undertaken by the Department between 1969 and 1971. To my knowledge, these two sources provide the only information from which an integrated profile of the characteristics of the native population can be derived. By this, I mean the availability to the researcher of a broad range of socio-demographic characteristics and the ability to use this information to study such specific concerns as, for example, the correlation between age, education and income.

The principal limitation of both of these sources is apparent. It is the lack of timeliness. The latest information from Statistics Canada is from the 1971 census and this is now nearly nine years old. Moreover, it is not now entirely certain that a comparable range of information will be forthcoming from the 1981 census so that we could measure the changes that have taken place within the native community over the past decade.

The situation with regard to the Department's own efforts to collect demographic information is equally bleak. The manpower surveys were never repeated though it was originally the intention to do so. A recent attempt in 1978 to resurvey a representative sample of the native male population of working age in the Yukon did not provide information which was statistically reliable.

Since the object of much of the Northern Program's concern is the native population, it seems appropriate to ask what it is we mean when we use this term. The answer to this question requires a short digression into the use of such expressions as "ethnicity" and "race".

We refer to a group of people as members of this or that "ethnic" group when they appear to share a sufficient number of characteristics to set them apart from some other group of people. These characteristics usually include a language and place of origin. They may include a particular set of religious beliefs. But most important, together they create a sense of social continuity for the group which seems to be acquired by being raised within a particular cultural milieu but which could be lost by too close a proximity to a more dominant cultural group. The reason for this potential loss is the fact that ethnic characteristics are learned and that entry into, or exit from, the group is open to anybody who wishes to take the opportunity to learn or leave behind those characteristics that represent membership in the group.

The term "race" has a much different connotation. It designates a group of people who appear to share a set of distinctive physiological characteristics. Since these characteristics are biologically inherited, a "racial" group is not an open group in the same sense that an "ethnic" group is.

These linguistic distinctions are purely formal and their simplicity does not necessarily apply when we come to examine the situation of a particular group of people. It is possible for people of different racial origins to share aspects of a common ethnicity and conversely people of different ethnicity can share a common racial origin. The distinctions between the Métis and the Indian are an example of this.

The Indian people, along with the Inuit, were the original inhabitants of the continential land mass of North America and were distinguished from the white immigrants by both ethnic and racial characteristics as these terms have just been defined. The Métis had their origin in the intermarriage of the French-speaking coureurs de bois and of the Scots employees of the fur trading companies with women of the Indian tribes. The economic basis of their culture - hunting the buffalo, trading in furs and hides with the settlements of the American west and engaging, as need required, in subsistence farming - had similarities to that of the Plains Indians further west. Religion and language appear to have been two of the more important attributes that set the Métis apart from the Indian.

The federal government, when it took over control of the Northwest from the Hudson's Bay Company in 1869, attempted to distinguish between the two population groups. The Manitoba Act of the following year set aside for the Métis 1.4 million acres of land and the intention was to provide each head of family with 160 acres of land for himself and a further 160 acres for each of his children (33 Victoria, Chapter 3).

There seems to have been less urgency to turn the Indians into agriculturalists. At the signing of Treaty No. 1, the government representative noted that reservations would be set aside for the exclusive use of the Indians and that these would be sufficient to allow them "to earn a living should the chase fail". Moreover, they were also free to hunt over non-reserve lands until they were occupied and tilled, at which time "you must not go over them any more". *

At is well known, the federal government's experience was at odds with its expectations. The conflicts of interest over the opening of the western plains to settlement led to the Métis uprising of 1885, its suppression and, as the historian Morton has noted, "their drift into obscurity and certain poverty", (The Last War Drum, p. 167). Possibly because of the reserve system, the Indian people seem to have been more successful in retaining some degree of cultural identity.

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*See Morris, A., Treaties of Canada with the Indians of Manitoba,pp. 28-29.

Returning to the subject of our data sources, the differing approaches to defining ethnicity have created problems in developing quantitative information on the complexity of the native population. For example, the census takes an objective approach and defines the respondent's ethnicity as that of his male parent. Since the 1951 census, only two categories have been identified, viz., "Indian" and "Inuit". The "Métis" were last identified in the 1941 census. The Department's manpower surveys, on the other hand, used a subjective approach and permitted the respondent to classify himself as to his ethnicity. Three categories were provided for this purpose, those of "Métis", "Indian" and "Inuit".

II

The relevance of these definitional problems and of the brief historical background will become apparent with some of the statistics to follow and with the interpretation I place upon them.

The need for the Department to place special emphasis on the needs of native northerners becomes apparent when we examine some of the statistical materials available from the 1971 census. There is a marked disparity between the native people as a group and the non-natives in terms of their respective standards of living and there is some evidence for the erosion of the cultural identity of the native people with the replication in the North of southern Canadian society. But of equal interest are the statistical materials from the departmental manpower surveys which indicate just how complex the situation is once we begin to examine the circumstances of the different ethnic groups within the native population.

Let us look first at the differences between the native and non-native components of the territorial populations.

The standard of living of most households depends on both the ability of the head of household to secure employment and upon the market value of the particular skill he or she possesses. The 1971 census reveals that, during 1970, less than 50% of the employed natives in both territories worked on a full-time basis. The corresponding figure for non-natives is 70%. (In this connection, full-time employment is defined as working for 40 or more weeks during the year for at least 35 hours a week).

Furthermore, those natives who did work full-time received, on the average, only 57% of the labour income of their non-native counterparts in the N.W.T. and about 68% of the labour income of their non-native counterparts in the Yukon. Table 1 provides the relevant data from which these calculations are made.

Table 1: Territorial Employment and Mean Wage by Ethnic Group, 1970

	Full-time employment		Part-time, casual or intermittent employment	
	No.	$\overline{x}$ wage	No.	$\overline{x}$ wage
		$		$
Northwest Territories:				
Non-natives	4,985	8,807	2,170	3,801
Natives	1,435	5,030	1,560	2,106
Yukon Territory:				
Non-natives	5,030	8,771	2,395	3,755
Natives	160	5,991	240	2,826

Source: Statistics Canada, 1971 Census (private tabulation)

Looking a little more closely at this situation, we find that this disparity stems largely from the fact that those natives who worked full-time were concentrated in occupations at the low end of the income scale. As calculated from census data, the average wage in 1970 of a full-time employee was $7,963 in the N.W.T. and $8,771 in the Yukon. In the N.W.T., about 1% of natives employed on a full-time basis received a labour income in excess of this amount whereas the figure for non-natives was 88%. In the Yukon, about 7% of employed natives exceeded the average wage for the territory. For non-natives, the figure was 56%. Table 2 sets out the data from which these calculations have been made. In brief, the labour income of employed natives was low because they were under-represented in those occupations such as mining and construction where a particular high market value is placed upon the skill being utilized.

There is also some statistical evidence for the apparent erosion of the cultural identity of the native people. In my earlier remarks on ethnicity, I noted that one of its determining characteristics is language. A possible approach is to examine the retention of the ethnic group's mother-tongue. For census purposes, a respondent's mother-tongue is the language first learned and still understood. In the 1941 census, for both territories, all persons of native ethnicity indicated that their mother-tongue was one of the native languages. By 1971, thirty years later, only 40% of the natives in the Yukon could make this claim. However, the situation has not deteriorated to the same extent in the N.W.T. and, in 1971, 85% of the native population still claimed the knowledge of a native language as a mother-tongue.

In seeking an explanation for this situation, we used regression analysis to test the importance of two variables which one would immediately think of as causes for the decline in the knowledge of a native language. These were the relative size of the native people in the total population of the territories and the percentage of natives who possessed no schooling. It would appear that these two variables could account for nearly the entire loss of the knowledge of a native language. (See Table 3)

By turning to the Department's manpower surveys, we can get a better idea of the differences between the Métis, Indian and Inuit components of the native population.

Table 2: Number and Percentage of Employed Persons Earning In Excess of Mean Wage by Ethnic Group, 1970

	$\overline{X}$	Non-Natives		Natives	
		No.	%	No.	%
	$				
Northwest Territories	7,963	3,405	68.3	15	2.2
Yukon Territory	8,771	2,725	55.9	10	6.6

Source: Statistics Canada, 1971 Census (private tabulation)

Table 3: Native Population - Relative Size to Total Population, Lack of Schooling and Possession of Native Mother-Tongue

	1941	1951	1961	1971
		(Percentages)		
Northwest Territories:				
Possessing native mother-tongue	100.00	100.0	93.6	85.1
As percentage of total population	78.6	66.6	57.6	53.4
Having no schooling	82.8	80.9	55.8	30.1
Yukon Territory:				
Possessing native mother-tongue	100.0	91.7	61.1	39.6
As percentage of total population	30.7	17.2	15.1	14.1
Having no schooling	74.7	52.2	32.6	19.5

Source: Statistics Canada, Censuses of 1941, 1951, 1961, 1971.

Table 4 shows how the employed members of these three groups within the native community utilized the time available for work. The figures in the column "potential man-weeks of labour-effort" are the product of the number of employed persons times the number of weeks in the year. Within the limits of this total, the disposition of actual work-effort has been classified by type of employment. The last column in the table measures the aggregate of time during which the members of the particular ethnic group were unemployed.

As can be seen, wage employment is the principal mode of labour-effort for all three native groups but assimilation into the wage economy had proceeded furthest with the Métis and in the Yukon.

In the Yukon, 70% of the potential labour-time of the Métis was taken up with wage employment and only 20% was spent in unemployment. Employed Indians spent about 58% of their potential labour-time in wage employment but nearly 38% of their time in unemployment. For both groups, time spent on hunting and trapping from which at least $200 in income was earned or on self-employment was minimal.

In the Mackenzie District of the N.W.T., the experience of the Métis was similar to that of the Yukon Métis. About 71% of their potential labour-time was spent on wage employment and unemployment accounted for only 20% of the remainder. Indians, however, only spent 43% of their available time on wage employment and they experienced slightly less unemployment than the Indians of the Yukon. As can be seen from the data in Table 4, the Indian workforce spent a significant 24% of its available labour-time on hunting and trapping, that is hunting and trapping for the purpose of income. The Inuit of the Mackenzie District were in an intermediate situation. About 56% of their time was spent on wage employment and 16% on hunting and trapping.

In terms of income from their labour-effort, the Métis of both territories are more favourably situated. Table 5 provides the relevant data. In the Yukon, 55% of the employed Métis reported earning $5,000 or more. Only 29% of the Indians were in this category. In the Mackenzie District of the N.W.T., the same ranking prevailed. Over 53% of the Métis earned $5,000 or more while only 16% of the Indians were in this category. Once again, the Inuit were in an intermediate position - about 29% of their number earned $5,000 or more.

There are also marked differences between these three native ethnic groups with respect to language retention. This refers to the language they speak. In the Yukon, 76% of Métis 14 years or older use English as their language of communication as against 38% of the Indian population. In the Mackenzie District of the N.W.T., 52% of the Métis used English exclusively in contrast to 20% of the Inuit and 10% of the Indians. (Table 6)

Table 4: Manpower Usage by Native Ethnic Component

	Employed labour-force	Potential labour-effort	Wage Employment	Hunting & trapping	Self Employment	Unutilized
				(man-weeks)		
Yukon Territory:						
Métis	37	1,924.0	1,347.5		196.0	380.5
Indians	156	8,112.0	4,689.7	354.5	152.0	3,067.8
	193	10,036.0	6,037.2	354.5	348.0	3,448.3
Northwest Territories (Mackenzie district):						
Métis	276	14,352.0	10,137.5	948.0	423.5	2,843.0
Indians	984	51,168.0	21,914.5	12,293.0	709.5	16,251.0
Inuit	306	15,912.0	8,907.0	2,583.0	276.5	4,145.5
	1,566	81,432.0	40,959.0	15,824.0	1,409.5	23,239.5

Source: DIAND, Survey of Statistical Data, Northern Manpower Survey, 1969-1971, Tables 16 & 19

Table 5: Incomes of Employed Natives - Yukon, 1969; NWT, 1971

Income Category	Yukon Territory				Northwest Territories (Mackenzie District)					
	Métis		Indians		Métis		Indians		Inuit	
	No.	%	No.	%	No.	%	No.	%	No.	%
$10,000 +	5	16.1	13	8.3	18	8.3	7	.8	8	3.0
5,000 - 9,999	12	38.7	32	20.5	98	44.9	125	14.7	70	26.2
1,000 - 4,999	10	32.3	68	43.6	87	39.9	410	48.9	155	58.1
Under $1,000	4	12.9	43	27.6	15	6.9	357	35.6	34	12.7
	31	100.0	156	100.0	218	100.0	849	100.0	267	100.0

Source: DIAND, Survey of Statistical Data, Northern Manpower Survey, 1969-1971, Table 12

Table 6: Native Population - Language Spoken

	Yukon Territory				Northwest Territories (Mackenzie district)					
	Métis		Indians		Métis		Indians		Inuit	
	No.	%	No.	%	No.	%	No.	%	No.	%
English only	76	76.0	256	37.6	330	51.0	274	10.2	148	20.0
Native Language and English	24	24.0	395	58.1	309	47.8	1,665	61.7	566	76.6
Native language only			29	4.3	8	1.2	758	28.1	25	3.4
	100	100.0	680	100.0	647	100.0	2,697	100.0	739	100.0

Source: DIAND, Survey of Statistical Data, Northern Manpower Survey, 1969-1971, Table 9

III

At the beginning of the 1970's, the federal government set out seven national objectives for the North, the third of which called for "... a higher standard of living quality of life, and equality of opportunity for northern residents compatible with their aspirations...". This and the other objectives were the goals of a strategy that proposed the strengthening of the renewable resource industries, the maintenance of the natural environment and, at the same time, the development of the mineral, oil and gas resources of the territories for the benefit of the entire country.

It is almost axiomatic to say that everything worth having entails some cost in its acquisition. To what extent, for instance, is it possible to have a higher standard of living derived from one mode of life and, at the same time, fulfill some of the aspirations that originate with cultural traditions derived from a different mode of life? A few moments ago, I presented some statistical data that suggested that a higher standard of living, - which I interpret to mean a greater command over goods and services derived from a larger money income - can be achieved but possibly at the expense of at least one aspect of the cultural inheritance of the native people, viz., their knowledge of a native language.

The question that must come to mind is whether such an outcome is inevitable. For instance, are the trends that seem to prevail in the North the consequence of causes over which individuals or particular groups have limited control? Or can they be averted by the deliberate action of people seeking some other ends? And, of course, there is always the most fundamental of questions: if these other ends are sought and attained, who benefits and who pays and in what amounts?

It seems to me that it is in areas such as these that demographic studies could be of the greatest use. The Department's interest, of course, is in the acquisition of factual information which can be used in the formulation of policies to fulfill its mandate. Those who are on the receiving end of these policies could also make use of such information if only to enable them to enter into a meaningful discussion as to what these policies should be. Lastly, such information would be useful to those persons and groups who have no particular administrative responsibilities but who do have a deep interest in the North, and in the solution of the problems of change it would be all the more useful because of its detachment.

Turning to particulars, I see the following as particular needs in the field of demographic studies.

First, it is inevitable that there will continue to be differences in the reported size of the various ethnic groups and, to some

extent, these differences will stem from definitional problems. What we should be working towards is the development of body of information which will permit us to make a reasonable effort to reconcile these differences. My earlier remarks on the notion of ethnicity were a first attempt in my own mind to come to grips with this problem.

Secondly, we need demographic material, particularly data on such subjects as work experience, educational attainments and the like, which is consistent over time. With the possibility of a retrenchment in the range of information being secured from the decennial censuses, this promises to be one of the more important problems that will be encountered in the 1980s. This means that researchers will have to turn increasingly to administrative data with all the attendant problems of utilizing statistics derived as a by-product of activity that did not have demographic interest in mind.

Lastly, and this is a matter of prime interest to the Northern Program in carrying out its responsibilities, we would like to become more involved in demographic studies which take a representative sample of a given population at one point in time and which trace at successive intervals of time the changes to this group as a result of the development of the northern territories. I would envisage that such studies would not only document changes in such aspects of people's lives as work experience, income, and the like but also changes in their attitudes to the changes that are going on around them and which touch upon their lives.

In conclusion, in times when it is necessary to get the maximum value from each dollar of expenditure, I would hope that conferences such as this could be used as forums where the demographic needs of the different parties with an interest in the North could be identified and where a tentative program of research could be blocked out which will make the best use of the monies available and which will eliminate duplications of effort.

Incidentally I must mention that when I wrote this, I intended to hand it around within the Department to get other opinions before delivery but I didn't do that. So, if there are errors or omissions, they are mine entirely and not to be attributed to the Department.

W. KEMP

General Chairman / Président du Colloque

I am not sure how we should proceed now but I think that between the introductory comments and the material you have presented, there's material out to open up discussion. Certain statements have been made and it might be time that we talked about what's on people's minds here. Maybe to begin that process we could go around the table and introduce ourselves to each other and then begin to talk.

PANELISTS / PARTICIPANTS

- *James Bobbish*
  (Cree Regional Administration)
- *Ginette Brulotte*
  (James Bay and Northern Quebec Office, Environment Canada)
- *Paul Charest*
  (Conseil Attikamek-Montagnais)
- *Gilles Couture*
  (Alliance laurentienne des Indiens et Métis sans-statut)
- *William Hedican*
  (Ontario Metis and non-status Indian Association)
- *Bill Kemp*
  (Chairman)
- *Robert Lanari*
  (Makivik Corporation)
- *Thérèse Langevin*
  (Kativik Regional Government, Kuujjuaq)
- *Chantal Locatelli*
  (Policy, Research and Evaluation, Department of Indian Affairs and Northern Development, Ottawa)
- *Donald MacLeod*
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- *Lucie Napert*
  (Kativik Regional Government, Kuujjuaq)
- *Allan Pelletier*
  (Ontario Metis and non-status Indian Association)
- *Allan Penn*
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- *Robert Reid*
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- *Lizzie York*
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DISCUSSION

Allan Pelletier

Our concerns relating to the historical and current efforts of demographers are extremely varied. We find ourselves in need of viable quantitative data relating to the Métis and non-status Indians of Ontario. As a result, we welcome this opportunity to present a few ideas. This presentation is limited in scope to three general areas:

a) defining the Métis and non-status Indian;

b) data acquisition; and

c) data usage.

By centering our discussion around these three topics, we do not intend to encompass all of our concerns, only to produce a representative sample.

The terms Métis and non-status Indian, are often misunderstood. In historical and contemporary studies, they have received a wide variance of application. If demographers are to truly define a racial or ethnic matrix, they must first clear up their confusion as to who we are.

Much of the information gathered or being collected concerning our people will have little validity as a result of the methodology used within the study. It is our belief that many of these problems can be eliminated by soliciting input from native people at all levels of research activity, particularly within the original design and field application.

Polarities between peoples of any culture are easily created. In the past many demographic research efforts have been used to the detriment of our people. We would like to remove the possibility of this occurring in the future. As a result, it is felt that research must be instigated by the target group for its purposes and not for the purposes of others.

Who are the Métis and non-status Indians in Ontario? Looking over any bibliography of native American demography will quickly cause the demographer to wonder just who or what this group of people are, or have been. Historically, we have been included in census material as Métis, half-breeds, Indians, French, English and just about every other category.

In searching for an historically legal definition of Métis, one finds the terms 'half-breed' and 'Métis' used both inclusively and exclusively. Future archival work will eventually solve the problem and we hope, will clear up many misconceptions. It appears that most demographic material collected on the Métis is of little value due to the wide range of interpretations of the term as applied to the people.

Anatole Romaniuk and Victor L. Piche's "Natality Estimates for the Canadian Indians by Stable Population Models 1900-1969" * clearly shows that the National Census and Department of Indian Affairs had underenumerated Indians prior to 1960. Yet the native birth rate was often over 4.4 per 1,000 and coupled with a declining death rate, caused a substantial increase in population.

Since the 19th century, the Canadian census has attempted to enumerate native Canadians along with the rest of the population. We can all agree that they have done a poor job. Most of the cause arises from the fact that the enumeration relies on racial or ethnic background. Prior to 1941, the term Métis appeared, since then it has been dropped. So where do we categorize ourselves? Are we Métis? Are our non-status Indian members still Indians in terms of census material? We can only point out that we must urge you to approach census figures with caution.

Data on non-status Indian people is even more difficult to find although the legal definition of a non-status Indian is far easier to arrive at than the term Métis. This group seems to be, in demographic terms, the truly lost people. Once removed from the band lists, they are removed from the demographers core source of material. Have they ceased to be Indian? Having left the reserve, do they no longer affect the band? Of course not. Yet for the demographer to include or exclude them from their statistical base, is to create a gross error. If in the past, the non-status Indian has become a non-Indian, we can only hope that will not re-occur in the future.

In the past demographers tended to identify the racial or ethnic category of the child through paternal lines. The Métis and Indian people trace their roots bilaterally. As such they have often been improperly identified. In terms of the census material, a child may have been designated as Irish. Yet for him as a person, this designation may be only partially descriptive. His relatives could include status and non-status Indians, Métis and Euro-Canadians. Ties of blood relationship are used by us to define ourselves rather than the traditional Euro-Canadian paternal concept of parentage.

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*ROMANIUK Anatole and PICHE Victor, "Natality Estimates for the Canadian Indians by Stable Population Models, 1900-1969", published in The Canadian Review of Sociology and Anthropology, 9(1), 1972, pp. 1-20, Fig., tabl.

Today, others consider the Métis to be more of a cultural than a racial entity. It is not for others to decide who or what we are, rigid external definitions do not fit into our concepts of existence. If an individual is of native ancestry and considers himself as Indian, and is excluded from the Department of Indian Affairs' band lists, then the proper term to apply to that person is non-status Indian. If the person, of native ancestry, does not consider himself an Indian then the term Métis is to be used. Although there are many problems associated with the use of self-definition in demographic material, it is the most acceptable approach to be taken.

GATHERING DATA

Only a portion of the demographer's efforts are geared to survey methodology, yet upon this activity rests the validity of the finished product. In terms of the Métis and non-status Indians, previously accumulated data is extremely questionable, as is much of the material gathered today.

Demographers have three basic sources for existing data, the Canadian census, governmental agencies, and material produced from private sources. Since 1941, Métis have not been included on the Canadian census. Thus for the past thirty-nine years a major source of information has not been available to demographers.

The Dominion Bureau of Statistics constantly collects statistical data which in one fashion or another relates to our people. Upon examining the methodology of this work, we have found that Métis and non-status Indians are most often included under the larger unit of native persons; or excluded as not being members of a community with legal entitlement. The level of error can range from 2.5 to 25% depending on the categories involved.

In research efforts involving predominately native communities and reserves, the level of error is most notable. The Department of Indian Affairs' band lists and accumulated statistics are a primary source for demographers. Yet in every native community and on every reserve there are non-status Indians as well as Métis people. The ratio of this group to those of status residents varies according to community location. The effect of their presence is seldom incorporated in demographic work. In reviewing the settlement patterns of our people, we estimate that this may produce a statistical error of up to 40%, which causes resultant data analysis to be quite invalid. In essence, various bodies are purporting to produce information concerning a homogenous people when in fact a large number of community residents are excluded from the original data.

We do not know, in demographic terms, whether our people living in communities of predominately status Indians, live a lifestyle radically different from the maxi-community. It is easy to assume that they do as a result of the lack of access to essential services. Health and welfare services are generally administered by the Department of Indian Affairs in such situations. We know that the Métis and non-status Indians have higher mortality and unemployment rates, lower educational levels and so forth. In a strictly quantitative sense we do not know how our people's existence in such situations effects demographic work, we do know it drastically reduces its qualitative value.

The Department of Indian Affairs is of course not the only government agency gathering statistics. The major problem with this entity comes from the fact that their statistical data represents treaty Indians in communities which include non-status and Métis peoples. This system of exclusion is the proponent of error. Other agencies, such as Health and Welfare, Canada Employment and Immigration, also gather statistics, but present an inverse problem for demographers. That is, their statistics include our people as Euro-Canadians. Any attempts at retrieving information concerning our group will end in failure. In general terms, current government statistics are of little use as they randomly exclude or include our people.

Private archives are an alternate source of information. Unfortunately, they too are plagued with the same problems as government agencies, most notably, the unacceptable level of data quality as a result of problems at different stages of data accumulation, processing, storage, and problems associated with the prospective users.

Once the body of the information is collected, regardless of its viability, it is not often available to groups such as ours. Often this is due to our ignorance of its existence, in most cases it is due to the fact that such information is to be used at the discretion of the research sponsor.

These problems still exist. Fortunately a few demographers are eliminating them by expanding upon some of the following principles. Demographic research is initially set up following the identification of users and their objectives. The target group should be considered as the primary users. In collaboration with the researcher, they are the ones to determine the information requirements. In those areas which require a purely technical format, such as the design of the data base, storage and retrieval systems, the work is almost entirely that of the demographer. Nonetheless, the users must have enough input so that such systems are comprehensible to them. Once the book work is completed, then the leg work begins.

Field practices will make or break a project. I am certain that you have all heard of some demographer or other that was forcibly evicted from a community as a direct result of his field practices. Such situations are becoming less frequent, yet the problem is still with us. Fortunately, demographers are discovering that the training of members of the target group to collect data produces a high rate of return. In a recent study of land tenure in Aroeland, a 100% response rate was achieved using this methodology. On a larger scale the OMNSIA Flip Survey employed native people to gather data on Métis and non-status Indians in Ontario. The response rate was 85%. There was a refusal rate of 5% and an inability to reach 10% of the identified households, largely those in urban centres. For an experimental project the rates are an example of the positive advantages of using native canvassers.

As I mentioned, the design of the basic system must be comprehensible to our group. As this forms the base for eventual subsystems, interpretation, analysis and presentation, the same level of final comprehensibility must apply. The 'ivory tower' approach to demographic research no longer has a place in our society. If the information is of no use to the Métis and non-status Indians of Ontario, then the project should be shelved. If any projects are to be conducted, the 'users' must be consulted throughout the process. Otherwise, the level of error will be so great as to cause the research to be of negligible value.

USE OF DEMOGRAPHIC RESEARCH

As with all indigenous and aboriginal peoples, we are caught up in the conflicts relating to the gathering of ethnic or racial data. Most of the objections to this form of research centre around various human rights concepts. Mainly we are concerned that such research may be used to establish adverse discriminatory practices or policies. Statistical data has more than once been used to reduce essential services to communities and regions or deprive various individuals and groups of their inherent rights.

Nonetheless, we as a group require such information. Various provincial and federal programs have been designed to assist our people. In general, these programs are administered using an often irrelevant, normally invalid and often adjusted data base. As a result, we have been allocated too few or too many dollars, depending upon the situation. In effect, we are either trying to solve a major problem with too few resources or a minor one with too many.

Qualitative assessments have formed the base for initiating many projects. We speak of improving the quality of life or producing viable economic development. Although motives for initiating projects are often questionable, we feel that the efforts of support agencies are mainly sincere. Despite this sincerity, many projects designed to assist

Métis and non-status people have failed. The cause of these failures are as varied as the projects themselves. One outstanding common element is the lack of quantative data which could have been used to evaluate the project feasibility, operational potential and its eventual level of success. Qualitative data is beneficial when forming blanket policy, for practical socio-economic development, they are of little use, we need the quantitative data.

We need quantitative data, more importantly, we need such data to be of immediate use. As an oppressed minority group, our major socio-economic concerns require more attention than those of the maxi-society. In the past, demographic studies concerning our people, have been largely incorporated in the studies of the over-all society. Although we certainly support such efforts, they are not applicable to our concerns. The end result of data collection which includes our people should be usable by our people, for our people.

When we speak of such generalities, we do not mean to negate the role of demographers. Generally, they do not have immediate control of the final product of their work. As such, the application of such material by others for improper purposes seemingly removes the burden of responsibility. We do not feel this way, the eventual use of material is partially the responsibility of the demographer. The use of data should be determined by such a person in conjunction with the expressed aims of the study group, and for no other purpose.

Our concerns with respect to the eventual use of material are basically the same as those which relate to field practices. Who among you truly knows when you have overstepped the bounds of acceptable behavior? Do you, as demographers, know which morals or customs of behavior are violated by your fieldwork? From personal experience, I would say a great number do not. The problem is not easily solved. Yet as a guideline, we suggest that the demographer is responsible for his ethical behavior, as an individual. In this context community initiated research could guarantee that the demographer would have a contact group who can guide him in the proper methods of conducting himself while in the field. It is our hope that such exposure would also promote the eventual use of material which is considered ethically consistent in the community.

Our people can no longer support the acquisition of demographic material for use in purely academic research. Future data research must be conducted upon the request of the community or region. The statistics that we require are those which will enable us to solve our socio-economic concerns. Any demographic work must be of immediate use to our people before it can be considered as valid.

RECOMMENDATIONS

1. A comprehensive bibliography of existing demographic material, relating to Métis and non-status Indians of Ontario, be produced.

2. The terms Métis and non-status Indians be used within a context arrived at through the process of self-definition.

3. The Métis and non-status Indians of Ontario be consulted at every phase of demographic research which relates to them.

4. Native people be employed in all phases of demographic research, and training be supplied where required, in an effort to maximize participation and eventual credibility of resultant data.

5. Any demographic research relating to the Métis and non-status Indian population be readily comprehensible and relevant to solving our socio-economic concerns.

6. That demographers dealing with Métis and Indian people be trained to do so in a fashion ethically consistent with native values.

Bill Kemp

Thank you very much. We're beginning to get down to the real problems and I think that really sets the framework for the things which all of us have been trying to understand. It's clearly set out and it's good.

Gilles Couture

Notre rapport à l'Alliance ne concerne pas directement la démographie mais plutôt les facteurs socio-économiques qui influencent les processus démographiques en particulier dans le cas du Nord-Ouest québécois et plus particulièrement en Abitibi-Témiscamingue. Le rapport est en français et j'ai ici quelques exemplaires pour les personnes intéressées. Si vous me le permettez, j'aimerais communiquer en anglais un résumé de ce rapport.

Our report is only indirectly related to demography. It describes the socio-economic forces that were instrumental in the progressive takeover of the traditional Algonquin territories by non-natives in the Abitibi-Témiscamingue region of northwestern Quebec. It documents the colonization of that area by non-natives since the 17th century, beginning with the fur trade in 1620, followed by the penetration of lumber companies in 1850, attempted agricultural settlement in the 1920s and 30s, and the development of the mining industry starting in 1926.

In less than two centuries the surface area of the territory occupied by native people decreased from about 100,000 square miles to a few thousand acres scattered across the Abitibi-Témiscamingue region. Traditional land use for hunting and trapping purposes was radically restricted by the imposition of a registered trapline system in 1947. The arbitrary creation of parks and reserves, the pollution of the environment by mining and other industrial wastes, the irrational exploitation of forest resources and the development of tourism, and hunting and fishing activities without consideration for native inhabitants further restricted the traditional native lifestyle.

During the same period of time the native people went from the status of being the first and only occupants of the territory to being a minority of about 10,000 people co-existing with 120,000 non-natives. Historical and legal evidence shows that the takeover of the territory and its resources by non-natives represents a series of violations of the traditional sovereignty of the Algonquin people. The provisions of the Royal Proclamation of 1763 as well as the Quebec Boundaries Extension Acts were never complied with by the non-natives who settled in Abitibi-Témiscamingue region and exploited its resources. The report is more or less an historical study but I feel it's important to situate the context in which demographic data is gathered and assessed and used for planning purposes.

Thank you.

Bill Kemp

That's also important. I think it relates to what's happening further north because they're just really beginning to get caught up in that situation.

Paul Charest

J'aurais peut-être beaucoup de choses à dire parce que le débat de ce matin - et même celui d'hier - a beaucoup porté sur les Métis et la distinction entre Métis, Indiens sans-statut et Indiens avec statut. Je parlerai ici du point de vue d'un groupe qui est une association régionale représentant uniquement des Indiens dits avec statut. On pourrait discuter longuement sur ce que ça veut dire. Ce n'est certainement pas un critère racial mais, à mon avis, une définition sociale, une définition légale et, qui vient de l'extérieur, des Affaires indiennes. A un moment donné, on a fait un registre des Indiens qui étaient de "vrais" Indiens et puis les autres ont peut-être été exclus à ce moment-là. Par la suite, les femmes qui se mariaient à l'extérieur étaient aussi exclues. Cela pose évidemment certains problèmes à ceux qui sont exclus et qui voudraient, à un moment donné, bénéficier de ce qui est prévu dans la Loi sur les Indiens ou dans les programmes pour les Indiens ou tout autre projet de développement, d'autonomie, etc.

Du point de vue des Attikamek-Montagnais, il y a une assez bonne connaissance des données démographiques globales grâce aux trois études que Ginette Brulotte a faites. L'une d'elles porte sur l'ensemble des bandes Attikamek-Montagnais et fut publiée en 1978. Il y a une étude uniquement sur les Attikamek et qui porte sur les perspectives de développement socio-économique. Il y a une autre étude plus récente encore sous forme de manuscrit, qui a été remise la semaine dernière, et qui porte uniquement sur les Montagnais. Il faut dire que les données proviennent du registre des Indiens et des rapports des agents s'occupant des réserves ainsi que des bandes elles-mêmes. Ginette me disait que récemment il y a eu certains problèmes dans la collecte des données. Les agents s'occupant de certaines bandes n'auraient pas transmis, dans les dernières années, des données touchant surtout l'accroissement de la population, en particulier les naissances. C'est donc dire que les données des dernières années ne sont peut-être pas aussi complètes qu'auparavant.

Les caractéristiques de ces données-là, dans l'ensemble - je pense que Ginette serait peut-être d'accord - correspondent à peu près à l'évolution des populations indiennes avec statut dans l'ensemble du Canada: fort accroissement démographique dans les vingt dernières années, taux de natalité et de fécondité très élevé - Ginette mentionne un taux de fécondité jusqu'à 300 pour mille dans le cas d'une bande en particulier,- accroissement de 4% et de 3% en moyenne par année dans les années '60 mais qui a tendance à diminuer de beaucoup dans les années '70. Ceci amène donc

certaines répercussions pour des groupes, des associations autochtones comme le Conseil Attikamek-Montagnais qui voudrait se servir de ces données-là. Une chose que je dois dire c'est que ces recherches ont été faites en collaboration avec le Conseil Attikamek-Montagnais. Donc, contrairement à ce que l'on a dit pour l'Alliance des Métis et Indiens sans-statut de l'Ontario, dans ce cas-ci il n'y a pas de problème de collaboration et d'utilisation des données pour les groupes indiens, les études ayant été faites à la demande et en collaboration avec l'association et les bandes en question. Donc, il y a une relation directe entre les recherches démographiques et les besoins des groupes autochtones des bandes.

Alors les conclusions qui peuvent être tirées de cela sont les mêmes que l'on a tirées je pense pour l'ensemble des Indiens avec statut au Canada. Il y a des problèmes très considérables dans le domaine du logement pour les dix ou vingt prochaines années alors que les jeunes enfants vont se marier et avoir des familles. Déjà il y a surpeuplement dans la plupart des bandes. On a compté je pense jusqu'à 18 ou 20 personnes pour certains logements, la moyenne étant de huit ou dix. Il y a aussi les problèmes au niveau de l'éducation qui se font sentir depuis un certain nombre d'années: construction de nouvelles écoles, agrandissement des autres. Il y a également toute la question qui concerne l'occupation. Je ne parlerai pas directement d'emplois parce que l'on doit considérer peut-être qu'il faudrait redévelopper l'utilisation directe des ressources des territoires autochtones, entre autres par les activités traditionnelles, les activités modernes comme la coupe du bois par exemple, le tout contrôlé par les autochtones et aussi, évidemment, selon les choix, des emplois dans des entreprises qui seraient contrôlées par des Indiens ou des non-Indiens.

Ce que je devrais dire en conclusion de tout cet exposé, c'est par rapport à la définition des Indiens avec statut et des Indiens sans statut. J'ai essayé de soulever le problème moi-même en tant que chercheur auprès de l'association pour laquelle je travaille. Quels rapports pourrait-on entretenir avec les Indiens sans statut et les Métis? A cet effet, il y a jusqu'à maintenant, semble-t-il, une certaine réticence à établir des collaborations. Dans le cadre des revendications territoriales et dont le processus est engagé pour le Conseil Attikamek-Montagnais, on pourrait dire que c'est une question délicate étant donné que lorsqu'il y aura des retombées de négociations, il faudra que les retombées soient partagées ou divisées entre un nombre x ou x plus y d'Indiens avec statut et d'Indiens sans statut et de Métis. Chez les Attikamek-Montagnais, la réflexion sur cet aspect-là n'est pas du tout avancée et il n'y a pas de position vraiment précise. On m'a dit qu'on allait réfléchir à la question et qu'on en discuterait par la suite, mais il faut que la réflexion se fasse au niveau surtout des localités où le problème se pose de façon plus cruciale. Pour ceux qui connaissent le Québec, il y a Pointe-Bleue en particulier, un contexte urbain; Sept-Iles également, autre contexte urbain et industrialisé et, à un moindre niveau, Bersimis. Cependant la question ne se pose pas tellement ou ne semble pas se poser dans les communautés dites rurales ou

éloignées soit dans le Haut St-Maurice ou sur la moyenne et la basse côte-nord. C'est une question à laquelle je suis très attentif et j'avais même engagé des discussions avec Robert Laplante, responsable de la recherche pour l'Alliance laurentienne des Indiens et Métis sans statut, pour des possibilités de collaboration au niveau de la recherche, mais pour le moment ça ne peut pas se matérialiser.

Lucie Napert

Well, the types of problems we are encountering are not related exactly to the notion of ethnicity. We want to point out the types of problems we have on a regional basis with current data collection.

For instance, there is the provincial compilation which is called the beneficiaries list. If it was done properly it would be a very usable tool for us to meet different needs in the regions for population information. But in making these lists right now, there must be a lack of communication with the communities. I don't know whether it's because we are far away or for some other reason, but we just received a list dated October 31st 1979, and we found that the data listed there were two or three years old. The type of mistake which we found in these lists were the doubling of names, births unrecorded, marriages unrecorded, deaths unrecorded, two beneficiary numbers for one person.

Now, on a regional basis we need data to be used for different types of specialized studies. Studies are not made only here in the South. We need to have these data coming back to us and that doesn't happen right now. I am glad to hear that the Conseil Attikamek-Montagnais has asked for an appropriation to do some studies, but our population has not asked for studies and whenever we have anything available it's not updated, not accurate enough to use as a basis for studies.

For instance we went to one community, which Lizzie knew very well and where she could quickly spot mistakes. There were 20 people who were not recorded. There were people out of the territory who came back and people who were in the territory who went out. There were 17 mistakes there. Civil status was not included - there were 34 mistakes in that and that's for a little population of 599 people. There were not just mistakes as such, but the overall numbers were wrong. The population listed was 709 people, including those who were out of the territory and there were 110 of them, which comes to a total of 599 people who were supposed to live there. The real figure is 632 not including the ones who are out of the territory. That's the real number of people in the community. That accounts for a margin of error of 5.5%. We have to deal with problems like that when we come to make a study of any sort.

We have to use some sort of list, some sort of basis, and right now the only thing we would have would be the beneficiaries list, although last year the Kativik Regional Government gathered some leftovers from their budget to hire one person to go all over the records and make a population list based on the social services data of the Ungava Hospital. The problem is that such a list was made only once. In the past we have had to use information which came from Social Affairs which came from the beneficiaries list which is, as you see, outdated. Furthermore, the way that the data was collected was very empiric. There was no scientific method used to gather this

information so whenever we try to work with trends, try to make estimates for the future, for instance, needs in housing, development in health services, we always have this problem. We have to deal with numbers from the past in order to extrapolate for the future and the numbers are very inaccurate. Of course, it's a small population and an error of five or six persons is too high to allow any substantial meaning to the conclusions we arrive at. So what we have been trying to get is a regional coordinator to gather this information, on a regional level, a project which doesn't seem to be going ahead either, we are encountering some problems.

So right now what I would like to point out is that when studies which are made in the South by some of the people here or wherever, who have an interest in northern populations, they should send us reports or make sure that the information comes back to us because it is very, very important. It has to be remembered that we have studies to make too, we have developments in progress and ours, the northern region, being right in the middle of the development era, it's very important that we get the information back in the territory. I noted a couple of things we do with those data. In addition, they are very important for the land holding corporation, for housing studies, for health and social services, social economics and cultural studies, employment and student projects, community council use, for community development planning and so on. It's at the regional level that these data are important in the North. So, please send them back to us. They are very useful.

Another thing which could be said is that we were hoping that Mr. Lorenzo Servant who is in charge of this beneficiary list would be here, or that a representative from his department would be here today. We must make sure that people are aware that these things are needed both in northern Quebec and the Northwest Territories.

Ginette Brulotte

I think I might recall that since the James Bay and Northern Quebec Agreement, the Department of Social Affairs has been responsible for making a register of Cree and Inuit entitled to benefit from the Agreement. In 1977 the first list of beneficiaries was prepared by the Enrolment Commission. It was then submitted to the communities, posted and given to the Department of Social Affairs as of July 1st 1977. The Department of Social Affairs is supposed to maintain the register, keep it up-to-date with the help of a local registry officer in each community. Apparently at first there were quite a lot of appeals, and it took some time to get organized in the Department of Social Affairs. It seems that now they would be ready to proceed with the up-date but what has happened is that there has been no up-date for almost three years now and that's why the lists are in such bad shape right now. I

think that for the Cree it might be different because the Cree have a double registry. They are registered under the Indian Act within the Department of Indian Affairs and at the same time they are registered with the Quebec Department of Social Affairs as beneficiaries of the James Bay Agreement. There is some difference between the two lists because the beneficiaries under the James Bay Agreement include non-status Indians and Métis, about 150 at Mistassini and a few at Fort George too. But the Cree have double registration while the Inuit depend only on the registry of Social Affairs to get pertinent data. I think it is very important to ameliorate communications between the Department of Social Affairs and the local registry officers. They are supposed to have somebody in the communities to make these communications. We have invited Mr. Lorenzo Servant to come. He was unable to come today but I think we have to keep trying.

Lizzie York

We tried to set up communications with Quebec - it doesn't matter who we talked to - they just wouldn't give us the information we wanted. Consultation just doesn't work. So there's got to be some way to apply pressure. We need pressure and we need a backup at least.

Allan Penn

The policy of the Social Affairs is to prepare an annual consolidation for December 31st of each year and the first consolidation was dated November 15, 1979, and then the first end-of-year report would be at the end of 1980 and they would publish monthly or quarterly circulars which will go into the individual communities so that in fact there is a mechanism in place which can be used to provide a reasonably rapid account of the Social Affairs files.

Lucie Napert

It's not only at the regional level that we have to face these problems, it's also at the national level. Whenever there are statistics from mortality or morbidity rates, whatever statistics they produce, they have to get their data from some place and the population resource, the only one they have is through this beneficiaries list. But the problem is that when there is such a degree of inaccuracy with the population data, they come up with statements which are absolutely ridiculous because the bases are not correct. There has to be some way of getting corrections made.

Lizzie York

In the Ungava region, it's not so bad because that's now up-to-date but in the Hudson's Bay region, it's really a mess. We have to straighten it out for sure. For example, babies have to be born in different places, at least four different places. Moose Factory is the only one that gives us the feedback on where they're registered and sends us the registry card. The other places do not do that so we have to trace all that before we can update. On the Ungava Bay coast, women have their babies in Chimo or in the community or in Quebec City and that's up-to-date. It's the other coast that we're really having the problems and we have to straighten that out before it can be officially recorded.

Lucie Napert

Also we have to deal with three different provinces. Babies are born sometimes in Timmins or in Moose Factory, Ontario, sometimes in the Northwest Territories, like Sanikiluaq or Frobisher Bay, some in Toronto or in London, there are some in Quebec, in Montreal, Quebec City. So we have to deal sometimes with three different governments to get the data back and there is no communication - none at all. So you cannot expect to get good data collection when there are these problems, problems we have to deal with on a day to day basis.

James Bobbish

The Crees have had the same experiences and the same type of problems. As far as any kind of official registry is concerned, within the communities we've had to rely on the ones that were done by the Enrolment Commission and basically what the Enrolment Commission did was to travel to the different communities and they used the existing band lists which have been described already as inaccurate. On the average, our band lists are at least two years old and I think that the key to what we are talking about is decentralizing the whole concept of where the registry should be kept. Right now we have to rely on Ottawa to provide us with our own band lists and the communities have many different kinds of situations as far as births and deaths are concerned. For instance, in the Cree region we have the Waswanipi band which is scattered over four or five different places. To get some kind of accurate enrolment for that particular community is very hard if you rely on an outside source to straighten it out for you and they don't know the actual situation in the community.

Lucie was saying that some of the Inuit babies that are born aren't registered. I have to say that Fort George is one of the guilty parties.

The hospital in Fort George delivers some babies from the Hudson's Bay region and I guess we have to begin to do our share there. The concept of demography is quite a new concept to us. Traditionally, the Crees were scattered out in different bands along the entire coast and they each did their own thing and nothing was registered, but as we're getting more centralized in these communities and regions, and taking into account that it's a development stage - as it was mentioned - I think it would be right at this time to plan for a way of controlling the birth, death statistics and marriage statistics.

In relation to that I think that the Kativik health board and the Cree health board should also keep a close eye on how the births and the deaths correlate to the actual health situations in the communities. This would be more or less on a confidential basis rather than making statistics public to describe the population situation and would only be used for the planning of health and social services and for any kind of studies that are related to medical services. At the municipal level, we could use these data for services such as employment, present needs and developing needs. There's a very big development stage and many things have to be done at the same time. If we can't base ourselves on certain numbers and accurate numbers, that point to population trends, we're going to have a hard time to plan our strategies for the future.

In connection with employment, I think that the Cree school board should take population trends into account so that they can direct students to certain subjects which will be needed in the community at a later date instead of trying to cope with something that is happening right now. We can plan for what the community will need and have the Cree school board have a close hand in this planning. They can develop a curriculum, and direct students so that the community can function as a society overall so that employment fluctuations within the communities will be predictable and we can try to keep the irregularity down as much as possible.

I think that if we did have accurate records of our births and deaths and marriages and so forth, we could have some kind of control of our direction. One of the suggestions that we put forward is that the band administration itself do the lists and try to get the coding from whatever department now is responsible. I understand it is the Department of Social Affairs. We would get the proper coding from them and let the band make their own list. They have a direct contact with the church right in the community and when, for example, they bring over the birth certificate, we know who the parents are, the child's name, the birthdate and everything. We could keep a continuous record of that and every six months have a complete list made so that we don't get into these delays of trying to update two years after a list has been made.

Ginette Brulotte

In most of the Cree communities now, it's the Department of Indian Affairs that's responsible for keeping the list of Indians under the Indian Act. The band administrator is responsible for the maintenance of the register and they have the register in the band office. This is for the registered Indians only except maybe in the case of Mistassini where it's probably the district office who makes up the lists. Maybe you know about it Don. You were involved in the enrolment process yourself.

Don MacLeod

Well, what's happening now is that responsibility for keeping this work up-to-date is passed around. Sometimes someone is doing it and sometimes they bring it to me and say: "Look, this is your responsibility." Nobody seems to be interested in keeping it up because there is no money involved in it. I usually keep my own band list up-to-date, but I have the church and I get copies from them of births and I just keep a band list. Then we have people from other districts, like we have some people in Chibougamau and we don't have records for them.

Ginette Brulotte

People on the north coast also have the problem of registration so I think that's a basic problem that should be first solved before we can do anymore demographic work.

Karol Krótki

Question: This business of births not being registered at all. How is it possible, is there no one around?

James Bobbish

Answer: Well, it's not a matter of births not being registered, I am sorry if I misled you. The fact is that the Minister brings the birth certificate to the band office and the band officer is responsible then to send it to the registrar in Ottawa. The whole idea is having a collection of names in a list to be used for discussion and planning purposes, this is what we are lacking because when we do send the birth certificate to the registrar we have a backlog of two years before they actually put out the list and send it back to the community.

Karol Krőtki

Question: In other words there is no doubt that births are registered? All births are registered?

James Bobbish

Answer: But they are not compiled in a useable way.

Karol Krőtki

Question: You mean delays?

Ginette Brulotte

Answer: No, something different, the births are recorded for the vital statistics, but before it gets on the Indian Affairs list, before the birth appears on the Indian Affairs list and then on the statistics of registered Indians for instance, it can take a year or two or three. There are delays between the time span from the community to the offices and again before its coded and then put on the computer and then the list prepared and sent back. For instance the list as of December 31, 1978 has just come out in the last two weeks. So it's almost one year before it's published, and even the list which is right now published as of December 1978, might not include all the births which occurred in 1978 so that's why when they are looking for newborn babies, they won't be there until next year and so on.

Karol Krőtki

So there is no problem with registration whatsoever. Registration takes place immediately. The problem is getting the information passed on to the list. There is a difference, a very substantial difference.

Ginette Brulotte

The births get registered. I think that at the time of birth, at the hospital, the vital statistics form from the province is completed. But before it gets to the statistics for the community, there is a lot of time lost.

Robert Reid

Question: Couldn't they make an independent record before you send the birth certificate off to Ottawa? I mean if it's used for planning purposes within the community, the fact that you know that the birth has taken place and you have filled in the documentation and sent it off means you can just make some kind of notation on your own.

Observer

As a point of information for Mr. Krōtki, you don't need a birth certificate to register a birth in Quebec. You can register on good faith. So in the South, as well as in the North, there are some problems in the registration.

Lizzie York

There have been some parents who are suddenly cut off from the family allowance and we have to find those registration numbers. We have to go through Quebec, through Ottawa, and then if we don't find them that way, we have to find out where this baby was born and when. All the documents that we need are in the southern part of Quebec, or in Ottawa, and when we try to straighten all these out we go back and forth with the Quebec government and the federal government and it keeps on going for the next six months before everything is straightened out. There are four families I know in Inoudjouac that have not been getting their family allowance for two years and we are still trying to straighten those out. It's not easy. We need to have a centralized demography study done in northern Quebec because the demographic statistics studies that have been done in past years do not mention Quebec native people, as far as I am concerned. Who collects these data? Those who collect them are not even here - they don't have time. It seems to me that it's not important to them.

Karol Krōtki

Question: Well, one conclusion would seem to be that some of the provincial authority should be taken away by the federal government. The federal government should ensure that the rules of registration are the same, all over the country and that would be a contribution towards the completeness and correctness of the birth registration.

Observer

Answer: It would probably be worse then. (Laughter.)

Bill Kemp

There are probably hours remaining in a conversation of this type. The actual problems experienced in the North, at the community or regional level, whether they involve keeping the records or using those records for some kind of planning and development, or other things, are being raised. I think we, as a demography workshop, should be advised of the real need to have a means of applying pressure of some type. If these are the problems then they have got to be solved and they've got to be solved at a level that satisfies the demands put forward in the paper from Ontario where we saw that the needs must be defined as northern and seen as northern, and a response to them developed within that context.

Lizzie York

Answer: It's not only in Ontario. The problem we have in Quebec is with Quebec actually. Most of the time when we have to call Ottawa, they refer us to Quebec. Quebec has papers but by then, we're being passed around from one department to another and they don't know anything. They say they don't know anything. It's really bad for our school records. There is an education department. It used to be under federal jurisdiction in Ottawa, but then they passed it to Quebec. Now we have to find records but we don't know who to contact. They might have it but they sure don't know where it is.

Karol Krótki

I saw recently two population registers, one in Denmark and one in Pakistan. The one in Denmark works so well that they gave up census-taking and said we don't need population census-taking anymore, we can rely on the population register. The one in Pakistan doesn't work at all. What's the difference between the two? The Pakistani one is a list, like the lists you have mentioned all the time. I think having a list is a fundamental mistake. It is a misunderstanding of what a population register can do and should do. Data never are; data always were, so a list is always out of date. So you want to forget the list, divorce yourself from the list and think of a method of population register which will work as a population register, not as a list because a list must be out of date.

Ginette Brulotte

The population register of Indian Affairs is a population register in that sense. The lists are produced from it once a year and the register is maintained and you can go back in it. There are family sheets or individual sheets and records of people going out and so on.

Lizzie York

We have to do our part at the Kativik Regional Government. We are going to have to centralize the census in northern Quebec. Right now we don't have anything prepared but probably in 1980 we'll start planning how we are going to do it. We will go to each community and tell them what to do, find out who is going to look after it, where to get in touch with the people at the regional level. At the same time we will have to call Quebec or write letters to Quebec about who is doing the enrolment and who is not. All that has got to be straightened out and we'll do it. If we have to use our own money, we'll have to do it. There are too many mistakes; everything has to be straightened out.

Karol Krótki

Within an hour of your doing it, your product will be out of date.

James Bobbish

I agree with you in one sense and I disagree with you in another. I think that for our purposes it is to our benefit to have a list. On the other hand keeping that list up-to-date is important. If somebody asks you at a particular moment for population figures, we want to be able to provide them. But on the other hand, for planning and development purposes, we would like to refer to a list, one that say was made in 1975-76 and see the actual population at that time, and then maybe for 78-79 and see the correlation between the two years and see what the spread of population is, if it has gone down or gone up. I think in that sense it would be useful for us to maintain these lists whether they are out of date or not. Even if it's four years back, we would like to refer to them and see in what direction the population is going.

Observer

There is another problem with these population registers. Most of the people who set up these population registers try to set them up as a list so that they erase information as soon as they update the register. They erase earlier information and then it is not a register anymore, it becomes a permanent list which is updated. I think that what is needed is not only an updated list but as was said, we need to have lists back from the past. For migration studies, for example, we need to know all the addresses, not only the last one. I know that people in the computing sciences have problems keeping all the information but I think that these problems could be solved and we should insist that the information never be erased. New information should be added only.

Bill Kemp

We're growing short of time. There are a couple of other things that we need to talk about. We want to hear about some recent demographic studies in Schefferville which form a substantive issue.* Maybe we could do that and then to come back to the material that has been put forward. I would like to look at the difference between what was said by these position papers and kind of the material presented by the N.W.T. There seems to be a huge gap there in terms of approach. You're saying that you'll decide who you are and the N.W.T. government will - sorry the federal government - they'll bring some labour and perhaps some linguistics and they'll show you who you are and that is also a problem. Right now Kativik is tied up in getting things straightened out but soon it's going to be a problem for them too.

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* See paper by François Vézina which follows the round-table discussion.

Anatole Romaniuk

My name is Anatole Romaniuk. I am from Statistics Canada. I would like to take a minute to discuss the question that will appear on the 1981 census. I am glad to say that the question now has been approved by the Cabinet committee. I would say that for practical purposes this is going to be the question. Now let me read to you the wording of the Arctic question as it will be included in the 1981 census. The question reads as follows: "To which ethnic or cultural group did you or your ancestors belong on first coming to this continent?" Then you have a list of various ethnic groups more important numerically speaking, and as far as the native groups are concerned, there are four categories: Inuit, status or registered Indians, non-status Indians and Métis. Now there are a couple of qualifications to this question.

There is one important qualification for native people which says that the phrase "on first coming to this continent" should be ignored as far as the native people's responses are concerned. You see the problem for native people vis-à-vis people of other origin on this continent. So that qualification has been included. Then as far as the Métis are concerned we have also a means of defining what is Métis people and I am using this broad definition not in any formal way but in a some kind of loose concept so it is stated as follows: "Métis are descendants of people of mixed Indian and European ancestry who formed a distinct social cultural entity in the 19th century". That is an attempt to give some indication as to what the understanding of Métis are by those who have designed the question.

Now I must add that the question has been designed in consultation with various interested groups. I don't know exactly who has been approached as far as the Indian people, the non-status and Métis are concerned. It took months of gestation to produce that question and the people who were involved, and those who have been consulted felt that the phenomenon is of such a complexity that the desire to capture that complex phenomenon by one sentence question is, perhaps, an illusion.

To comment on the nature of the question you can see here it reflects self-perception, and I think it comes closer to what Mr. Pelletier and some other people have indicated as their preferred approach. It's however likely to cause some problems for the scientists who are concerned about historical continuity. In the first sentences the criterion for the classification by ethnicity was the paternal line which is a biological concept. Now you have a more logical, socially perceptive concept, and ethnic and cultural elements are admitted in the question. I guess that there will be some problems for you who work with these data in the future respecting their historical continuity. However I think there is a greater analytical capability in these questions as far as the native people are concerned.

I have covered what I feel is relevant to this group. I am glad to say now we finally have the question. Perhaps it is not the best one but it is there, whereas for perhaps three years we were very doubtful whether we would be able to have a question on ethnicity. As a matter of fact, because of financial restrictions, there were debates as to what kind of census we should have, the size of the census: should we have headcounts, or should we have a census that covers other data such as ethnicity. I personally am pleased that we got an optimal census as far as the content is concerned.

Q. Well, what's your definition of non-status Indian?

A. I have nothing here to indicate that we have anything special on non-status Indians but since it is a kind of self-perception concept, I would say that anyone who perceives himself as Indian but not a status or a registered Indian, may classify himself or herself as being non-status Indian or, depending on perception, may say Métis.

Chantal Locatelli

I would like to talk about some of the research projects that are available to you from the research branch of Indian Affairs in Ottawa. There are five reports that we have that may interest you. Three of them are relevant to the Canadian North and two are recent demographic publications. The first one is the "Income Security Program for Cree Hunters and Trappers", prepared by Ignatius LaRusic in 1978, the other one is "Negotiating a Way of Life", also prepared by Ignatius LaRusic in 1979. The other one will be released in early 1980, "The Socio-Economic Impact Model for Northern Development" by Bernard Blishew, Alexander Lockhart, Prudence Craig and Elizabeth Lockhart. The other two were recently published in the summer, they weren't prepared by contractors. They were prepared by people in-house. One was an overview of demographic, social economic conditions among Canada's registered Indian population and the fifth one was a Demographic Profile of Registered Indian women. I will leave copies of these in both French and English on the table.

"Determining housing needs in Native communities"

François Vézina

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Introduction

I was initially invited to address a small Native group on a method used for estimating housing needs. However, in view of this much larger and more diversified audience, in addition to presenting the simple demographic method, I would like to describe the type of work we have carried out in Native communities and relate to you my experience with the Naskapis of Schefferville and Crees of Quebec.

The political situation that existed up until now has made it possible for the Native communities of the Québec Middle North to plan ahead and undertake a huge housing program aimed at meeting the immediate housing needs of the Crees and Naskapis. Crees, Naskapis and Inuit have negotiated land settlements and have been awarded large monetary compensations. It goes without saying that all these negotiations started because of the James Bay Hydroelectric Development project. Let me now review briefly what is going on in each community.

The communities

Fort George, one of the Cree coastal communities, contemplated relocation in 1976. We, Daniel Arbour et Associés Inc., town planning consultants, carried out a relocation study for the Band, and last year, started the construction of the new town for Fort George which is to be called Chisasibi.

In order to build this new town, we had to estimate the number of housing units required and to do that, we developed a simple method.

I hope to have feedback from the demographers here, to see if this method can be improved and simplified. We had to determine the number of housing units required for Fort George. Pretty soon we might have to do the same thing for Great Whale River, where there is a potential relocation of the Inuit community. In Nemaska they just started building a totally new community. At the present time there are eight houses and the community should be finished within five years, we don't know exactly how many houses will be required. There is also a new community being built in Waswanipi. The Naskapis of Schefferville are moving. We did a comparative site study last year for the Naskapis and we assessed the technical qualities of three different sites suggested to us by the Naskapis and at the same time we performed a housing needs analysis with them.

For all the Cree communities there is a housing agreement which led to the formation of the Cree Housing Corporation and their objective is to build a house for every family who needs a house within the next five years and this is spread over eight communities. It's a huge project and we had to go into every community to find out what the housing needs are. I intend, today, to explain the method we used. I'll give you more background information and show you why the method is simple and effective.

Housing conditions

In most of these Native communities the Native residents have experienced poor housing conditions; there is a housing shortage in mostly every Native community, Cree or Naskapi. The houses were generally too small for the families in them, of low quality and in other communities the location of the village, from a social or physical perspective, is unsuitable. The Naskapis of Schefferville lived next to the Montagnais, the Montagnais and the Naskapis don't feel that's the best arrangement and the Naskapis have asked to relocate because of this difficult social situation. From a physical perspective, Fort George is an island in the middle of the La Grande River which is eroding away. According to the Agreement, the island is to be protected from erosion, and a bridge built that would link the island to the mainland. But the Fort George Band decided that it would be better for them to relocated to the village. So they negotiated and signed the Chisasibi Agreement and James Bay Energy Corporation and other agencies are more or less financing the relocation.

Determining housing requirements

To estimate the size of such a relocation, it is important to determine the right number of housing units required. The relocation of Fort George and the development of the new community of Chisasibi is a

$50,000,000 project. In Fort George there are 220 houses. Two or three years ago, along with the local population, we calculated that there is a need for 330 houses. The houses account for a quarter of the approximate $50,000,000 cost of relocation. Too often a housing study is done quite rapidly - there is not too much attention put into it and in a couple of years if there are not enough houses people simply wait. But in this case, the housing study represented $15,000,000 as well as the welfare of all the 2000 residents.

It's important that the local population agree with the figure of 330 houses, so we work with and for the local communities. Now, in most of the Cree communities, there is a five year program. We have just completed the first year of construction of the houses and we want to know what the community wants next year. How many houses are wanted or needed? It turns out that in only one community - Mistassini - do the people know exactly how many houses they want. They don't rely much on the housing analyses prepared by Government Departments. Quite often these are analyses made from outside the community and they are not accurate enough. It's been my experience that the results obtained from our studies are quite different.

The communities have now set up housing committees who will determine the number of houses needed for the next four years, and we're already having difficulty. For instance, with Waswanipi, as was underlined earlier, many of the people registered as Waswanipi band members live outside the community, they live in other Native communities or in white communities and nobody knows when they want to come back or how many want to come back exactly. The same thing goes for Nemaska, where there are only eight houses built. Most of the Nemaska band members are gone trapping for the winter and there are only ten men in the community right now. We have to know right now how many houses we need. It's difficult to do some kind of a survey when people insist on being counted.

We also have the problem of the Crees that work in Val d'Or. Their objective is to move back all the offices into the Cree communities. No one knows exactly where they will move, which agency will move them into which community and how many people are involved. For instance, if they were to move all the agencies to the new Fort George community, in addition to the 330 houses for the Fort George Crees, it would mean another 100 houses have to be built. It would have a large impact, even in Fort George, which is the second biggest of the Cree communities. In any other community they would almost submerge the local population.

<u>The Five-Year program</u>

We have been asked to prepare a five-year housing program and the method used is limited to this time span. In fact, there is no practical reason for us to do a larger term analysis of housing needs, since land preparation and drainage water and sewer installation and subsequently house construction can all take place within the five year target.

The method

Tools required include a band list and a plan of the village. I just found out through this conference that the beneficiary lists are not up-to-date, that's what I was working with - and there is also a band list so in future I'll try to find out which one is best. Nevertheless, we go into the community and we carry out a survey. We enter each house and make a list of all occupants and we ask them how many houses they want. If there are ten people - six of one nuclear family and one child who is married and has two kids, we ask that second family head if he or she wants a house of their own. If they prefer to live with their parents - in many instances they do - we note that only one house is required. In other places you might have two or three families living in the same house and the second and third families will want a house of their own. Such social factors cannot be derived or introduced through mathematical models.

Because band lists are often incomplete or out-dated, we go out and do a complete survey of all the houses and once that is completed it is confirmed, first of all, that the band list is out-dated. May have died and most children under five are not listed. But these do not affect our counting of the houses needed for the next five years. We also find that many band members on the list live outside the community. We have to know if they wish to return. As a demographer or a consultant, we are not able to perform this study down south. We must enter the community, have a good knowledge of it and we must have local people working with us. The local people, members of the housing committee, will report on the intentions of the people living outside the community. We find also that there are many individuals from other communities that live in the community under study and they are not on the band list. We want to know their intentions, do they want to, for instance, remain in Rupert House or go back to Mistassini? We have encountered other problems.

Task 1: The Survey

In Schefferville there were 43 households and we interviewed them all. It took two days and we found there was a need for 14 new houses. We also found that there was a problem of out-marriage in that the Naskapi women were marrying Montagnais who lived right across the street. According to local representatives, the Montagnais all seem to have a slightly higher social status than the Naskapis and it appears that they have more facility in attracting Naskapi women. Young Naskapi men are running out of women and this is taken into account in our housing analysis.

Task 2: Headship Rates

Based on our survey and census data, age-specific headship rates are computed. These represent the number of household heads as a proportion of the population for that age. So you have, say, between the ages of 25

and 34, ten households heads, both existing and desired, and you divide that by the population that is aged between 25 and 34: ten households for 30 persons = headship rate = 0.33. This means one third of all people between 25 and 34 are household heads or wish to form a new household. Headship rates for each age group are computed and it is assumed that these headship rates will remain constant over the next five years.

Task 3: Forecasting "1984" population

The next step consists of forecasting the population in five years. Migration, birth and mortality rates are not applied: migration rates are difficult to establish, birth rates do not affect the number of households in five years and deaths between the ages of 15 and 64 for a small population, are not significant in the course of five years. Age groups are simply shifted from one age group to another, eg.: 40 persons between 15 and 19 years of age in 1979 means that there will be 40 persons between 20 and 24 in 1984. This operation is simple and adequate, and can be performed by the local housing committee.

Task 4: Applying Headship rates

1984 age-groups populations are multiplied by the corresponding age-group headship rate which remains constant through time. By adding the number of household heads the number of units required in five years is determined.

Method's advantages

This method is fast and simple and it's relatively accurate. It can be performed within a community by the local residents. It involves all residents in a consultation process which is extremely important at the local political level and it takes into account the age structure of the population. Looking at the age pyramid in most of the Cree communities, the age groups between 15 and 24 are very wide. There are lots of young people who will be coming of age to marry and have families and this method takes the over-representation of this age group into account. Regarding the size of individual houses to be built and size of individual families the method does not consider the number of children. It's not so important at this point because large identical houses are being built in each of the communities. There are two models - they have three or four bedrooms and the basement is finished. If they decide to have more children later on, it is possible to add bedrooms in the basement.

Method's disadvantages

The disadvantages of our method are that it requires knowledge of the community and its people and most demographers and researchers don't know the specific conditions within a particular community. It cannot be

performed by a demographer outside the community. Timing is also a problem. Most of these surveys have to be done in the summer time because a large percentage of the Cree household heads and their families leave the village in the winter time to trap. When they come back in the summer time, they find out they haven't been consulted about the kind of house they want or whether they want to continue to live two families in one house, they are quite upset and with good reason. Finally, another disadvantage is that this method doesn't consider migration which no demographer has attempted to predict.

It is very difficult to have data on migration for these communities. No one knows what is going to happen within the next two or three years. Will the people living down south move back to the communities because the living conditions will be better? We don't know. Many are living in Native communities in Ontario and they are waiting for their houses to be built. We don't know if people will want to move outside the community to seek higher education. A significant increase in out-migration may result from the introduction of television or newly gained road access to points south. In Fort George, for instance, four or five years ago there were only a few trucks, today, now that there is a permanent road, there are over a hundred "suburban" vans and people travel down to Val d'Or (approx. 600 miles) quite frequently.

All this concerns housing. Concerning community facilities, we haven't yet looked into that thoroughly, but a decrease in the birth rate is being mentioned. Its implications in school design are very important. As a flexible solution in Rupert House and Waswanipi, schools are in houses right now. Maybe they can keep on building schools in houses and as the school population drops (if the birth rate is decreasing) they will be able to convert the schools back into houses. This is just one practical solution from a planning standpoint but it shows that the demographic information is essential to the good planning of a community.

Rapporteur

Glen Grant

Department of Planning and Program Evaluation
Government of the Northwest Territories
Yellowknife, N.W.T.

I was asked to act as the Rapporteur for the morning session. I've made no attempt to provide an impromptu analysis of what happened this morning - you were all here and I don't want to comment on information to which I have no prior exposure.

Ginette's introduction served as a good framework for the discussion.

One clear observation was the invitation to demographers to question the relevance of some peripheral, or perhaps subtle, academic, research questions that have been asked in the past. Perhaps that type of analysis is a luxury that cannot be afforded in the absence of basic descriptive research in the area in question, for instance, absolute numbers and racial distribution. I think this call is seated in rapid demographic change and the lack of inplace monitoring statistics; a lack of framework for the monitoring of movements and activity.

The second observation I made was that there is a healthy interest in the subject of demography by the subjects of research. It was not long ago that some communities refused to provide information with regard to ethnic origin, and now they themselves are asking for this information. There is a need for this information and I think it's useful that these questions are being asked where they should be asked, that is, in the communities themselves. We have heard the request for feedback. I think that's the lesson that all researchers should take. You can acquire credibility and confidence by resubmitting your information back to the target population and it should be a two way street. Another point was the use of data collectors from the community; it makes sense to replace theoretical knowledge with the intuitive knowledge of the people who live there.

The basic problem of definition was revisited this morning by way of the self-perception question and that was dealt with yesterday by Barry Roberts. I think we covered that fairly well. If you're going to operationalize a definition I can't see how else you can do it by means other than a self-perception type of question.

There is a place for sensitivity to needs, basic demographic information needs: "Give it back to us in a form that we can use" made by the ultimate user. I think all of these questions point to the need to rephase the idea of relevancy.

One clear viewpoint that came up many times is the confrontation of the limitations of small area analysis and anybody who has done research in small areas has come against the question of accuracy, of the time dimension, of the need for statistical detail at the community level and the lack of infrastructure to collect it consistently and report it. That's a basic question and a problem faced by all statistical agencies in small area analysis. Many of the people are frustrated with the problems associated with it and we saw their frustration.

Third Theme / 3e thème

The implications of demographic changes in the Northwest Territories

Les conséquences des changements démographiques dans les Territoires du Nord-Ouest

Chairperson / Président

Robert Bone

Director
Institute for Northern Studies
University of Saskatchewan
Saskatoon

Chairperson / Président

R. Bone

Good afternoon,

Having the advantage of being at the first workshop, I must comment that there is one very powerful difference at this workshop, and that is the presence of a significant group of people representing northern and native organizations. This is very important for this workshop and it is also the first time I've been at any such scientific meeting that is attempting to involve northern people and native organizations that there has been such a fine turnout. We have all benefitted from this turnout and I hope that the representatives from the North and the native organizations feel as warmly about this as I do.

There is a place for this kind of dialogue and communication between really three actors: academics, that is university people, government people and of course northern people and I think what has happened today is extremely healthy and augurs well for the future. I would also like to make a few comments on research.

We have heard about the desirability of research having utilitarian applications, being of immediate use to people. No one would argue against that. Having a direct and immediate use by society is what knowledge and understanding is all about. However there needs to be an appreciation that there is another form of research or understanding that may not have an immediate payoff. Some people call that pure

research. As an academic I would like, again, to make the case for pure research, because it is out of pure research that we develop the tools and the understanding to do applied research. One is not separate from the other. Today we have an example in the study that we are going to be focusing on, "The Implications of Demographic Change in the Northwest Territories". In my opinion, this study is a marriage between pure research and applied research. It is in part a baseline study and it is in part a statement about where we are and how we do demography in the North. Equally important, it is a statement of the implications for demography upon the North and northern people. We have in this particular study all aspects of studies that academics like to see and what people who are interested in applied studies like to see.

Dr. Hamelin is to be congratulated for undertaking a most difficult and complex study under rather strenuous conditions. The conditions of the contract involved a short time period to do the work. Secondly, the terms of reference were vast. To say the least, it was impossible to do justice to all parts of the terms of reference. As a result Dr. Hamelin made some strategic decisions to make sure that the main points in the study were well covered and that those that were left over were at least touched upon, so that the ball could be picked up in the future by the Northwest Territories government and by other people interested in demography. The format of our session is as follows: First of all the distinguished author of this report will present it. The participants will make comments. We will have one of the members of the Science Advisory Board of the Northwest Territories, which commissioned the report, make some observations. That is Don Stewart. Next we will have Dr. Trevor Lloyd of the Association of Canadian Universities for Northern Studies make some comments and I believe those comments will concentrate on the broad political implications, particularly for native peoples. Norbert Robitaille, of the Département de Démographie, Université de Montréal, will look at the methodology, concentrating on the demographic aspects of the report and we had hoped that Peter Ittinuar would be here representing native peoples and also as a Member of Parliament for one of the important regions of the Northwest Territories, but he is in Frobisher Bay looking after matters concerning land claims and I.T.C. business so we'll unfortunately not have his observations.

In introducing Dr. Hamelin I should not list his major academic accomplishments because I would take up the whole meeting. I would like to say that Louis is well received in the academic world in Canadian universities and in Canadian society and in the North in particular. He is an unusually gifted person who has made many perceptions of our society from a geographer's perspective. It gives me great pleasure to turn the podium over to Dr. Hamelin.

"Contribution to the Northwest Territories population studies, 1961-1985"

Louis-Edmond Hamelin

Recteur

Université du Québec
Trois-Rivières, Qué.

I want to thank the Northwest Territories Science Advisory Board and the Committee on Northern Population Research for having invited me to study and deliver a paper on some Northwest Territories demographic matters.

First, I must discuss the inadequacy of the basic data. The uncertainty of quantitative documentation may be seen with reference to even the most basic data; that is to say the total population of the Northwest Territories for any year. For 1976, seven totals may be found, they range between the lower and higher figures making 20%. Two reasons for these discrepancies are the usual under-counting by national census, and the double counting of temporary people as permanent residents made by some Northwest Territories agencies. Any observer would know that the fact of choosing one base or another produces changing demographic rates which in turn influence the slope of our forecast. We have tried to throw some light on the problems of multiple data for the same phenomena and for the same year. Interpretation of these parallel data led us to develop the concept of permanent population and current population, the latter being higher by roughly 4,000 people for the same year.

Method of Projecting

The following is a summary of the assumptions which we have adopted on demographic matters. Among Indian people, a slight increase in mortality linked to aging. A stable birth rate. A slight increase in the back to the land movement. Net migration among white people slightly greater than in 1973-1978 but less than during the 1967-1973 period. My projection "A" uses data for permanent population and my projection "B" for current population patterns.

Economic Factors

We have put in our projection no single new enterprise employing thousands of workers for the next ten years. A higher rate of development in the Northwest Territories than in Canada as a whole. Southerners will still finance northern administration and services, at least at the present level. Slight development in the indigenous economy as such and in the contribution of native people to the dominant economy. A slightly higher rate of full-time employment among indigenous people and no drastic application of the 'freeze' ecology, that is to say to do nothing but leave nature as it is.

Political Factors

No change in the external frontier of the Northwest Territories. No world war, no new inter-ethnic difficulties of any magnitude. Some political evolution for native people through a land settlement and also for the Northwest Territories government itself. These two political developments will bring into the Northwest Territories what we have designated as "political money". It will be the main economic factor. At the end of the projected period (December 1985) events in the Northwest Territories may become more susceptible to change than has been observed during the years from now to 1985.

Method of Projecting

There are two steps in the elaboration of each projection. The first was an estimation of the structure of the population from 1971 to 1976. We start from the 1971 census. The yearly report on health of the Northwest Territories provided data by ethnic group on the number of children born and of people who died. The family allowance statistics give data for migrants, all on an annual basis. With these statistics, and with the number of people living in 1971, the idea was to reclassify by age and sex, the structure of the population of the Northwest Territories in 1976 in each ethnic group: Indians Dene, Eskimos or Inuit, and others, mostly whites, and some 2,000 Métis.

Having obtained the results of these estimates, the second step was to extrapolate, also by ethnic group, age and sex, always by these three things, from the number of living people in 1976, under the assumptions of fertility, mortality and migration, the structure of the population expected by 1985. Each year the number of births was calculated by applying a constant fertility rate. I say constant, I may receive criticism for that, a constant fertility rate likely to occur in each ethnic group during the entire period. The number of deaths was obtained from an estimated mortality rate, again, constant for the entire period. Future fertility rates per 1,000 women of the 15-49 age group were calculated for the years 1973 to 1976. They were as follows: 108 for Indian people, 168 for the Inuit and 100 for "others". Projected mortality levels were obtained from crude death rates between 1972 and 1976. For Indians and Inuit the expected mortality rate in the near

future is estimated at 6.5 per thousand, while the rate for white people was as low as 4.6. I comment on this; these relatively high fertility rates and relatively low mortality rates have been applied to under-recorded population data and we think what we could have exaggerated on one side we can recuperate on the other side. We are trying to check on this.

The number of deaths were then distributed among each age group and also by sex over the years for each ethnic group; we have used percentages given by Lu and Mathurin in Ottawa. To determine migration, we applied a constant rate of net migration for the white population, that is to say an increase of 1.5 per cent of the total permanent white population for the preceding year, in accordance with a trend which has continued during the last ten years. Among non-indigenous people, the total number of migrants were also distributed in each group by age and sex. According to data from health care the two classes from 20-30 years old account for 43 percent of all net migrants. As these percentages apply only to a few hundred people, they have not had a great influence on the total number of people of these ages already living in the Territories. We cound not, through that process, expect to find significant anomalies in the final distribution of people by age classification. For our calculations (1971-1976) and our projections (1976-1985) we had to effect, every year, an age-class shift of one year so that every year one-fifth of the five years' age group was moved to the superior age group. This shifting was the first operation we made after obtaining the final volume of population for the preceding years.

The second part of this account outlines the highlights of my report. We will be concerned with six dramatic situations. The first is the evolution of the current population of the Northwest Territories, current according to the concept I mentioned before. Data on current population disclosed one of the most striking characteristics of the North: the uneven pattern of demographic growth per year. That situation was not shown through census. For the years 1966 to 1971 the percentage increase of the Northwest Territories population was 21, and for the next five years 21, as both values are the same. They may give the impression that the northern population is constant. On the contrary. Our estimates which incorporate the yearly migration give evidence of chaotic evolution in the demographic trend. So for the years 1969 to 1971, the mean annual increase was as much as 7% per year. But for the year after, the increase was only 1%. So if you take the decennial mean, you cannot see this phenomena. During the last ten years considering the rate of evolution we could recognize two periods: the first from 1967 to 1973 with high annual increases, mostly connected to administrative transfer from Ottawa to Yellowknife, and major oil and gas prospecting. So 1967-1973 was, let us say, a positive period. The other period since 1973 having a yearly alternative migration balance corresponding to some political and economic uncertainties is a case of disjointed growth. Both periods testify to wide variation almost every year. Such a demographic mobility reflects not only the stop-and-go strategy of decision-makers from outside but also is a major factor in the development of the North itself.

Second, we will look at factors of development by ethnic group. Table 1.6 (reproduced on the next page) also shows the respective contributions of natural increase and net migration to current population growth. For the 1966-1975 period it appears that 60% of the 15,519 total increase is the result of births exceeding deaths, sixty percent of natural increase. In fact figures have to be determined on a yearly scale. Eight out of ten years show a surplus of population coming from natural increase; only the years 1970, 1971 and 1972, the big year of transfer from Ottawa to Yellowknife, have more new northerners entered through net migration. Two years during that period, 1966 and 1973, show negative migration. We could now add 1977 and 1978; 1977 was the worst year considering population evolution in the Northwest Territories.

Thus natural increase is not only the most significant contributing factor in the Northwest Territories but it is an indication of some demographic stability and prolongation of the present ethnic official composition. Some writers have noted that statistics on vital characteristics in the Northwest Territories are becoming more precise; theoretically, completeness of natural increase data should lead to a lower migration estimate, for migration is often considered to be a residual calculation value. It's not the case. Such a situation does not explain the diminution of net migration after 1973. Low migration values have also been recorded by family allowances statistics, and they are not a residual value. Finally, during the last decade, yearly numbers of births and deaths were about the same. Then for an increasing total population, the rate of natural increase significantly declined. Since 1971, it appears that the drop will level off to a plateau, but it is hard to predict how long that situation will remain at that level. For the sake of our projection, we think that level will stay up to 1985.

Among ethnic groups, natural increase does not have the same importance compared to net migration. The growth of the native population comes almost exclusively from the Territories. Whites, on the contrary, have two sources of population expansion: migration and natural increase. During the decade 1966 to 1975, migration was responsible for slightly more than 50% of the total growth of white people. Since the end of the great in-migration period, that is to say, 1972, natural increase has become the predominating growth factor among whites.

Third, there is a variation in official ethnicity. One area in which conflicting statistics give rise to political discussion is the ethnic composition of the population. Neither native nor white people want to be seen as a minority. Ethnicity has two major aspects, relative to numbers of people defined by language and to their consciousness of belonging to a group. With respect to the quantitative aspect, one may be satisfied with usual census accounts or he may seek other data.

TABLE 1.6
Current population, growth factors, Northwest Territories, 1966-1975

Year ending December 31	Natural increase (a)	Net migration (b)	Current population No.	Annual No.	Change %
1965			30,767		
1966	929	-186	31,510	743	2.4
1967	993	210	32,713	1,203	3.8
1968	1,061	447	34,221	1,508	4.6
1969	979	877	36,077	1,856	5.4
1970	1,057	1,649	38,783	2,706	7.5
1971	951	1,715	41,449	2,666	6.9
1972	925	983	43,357	1,908	4.6
1973	967	-457	43,867	510	1.2
1974	839	166	44,872	1,005	2.3
1975	999	415	46,286	1,414	3.1
1966-1975	9,700	5,819		15,519	
1966-1975 average	970	581		1,551	4.1

a) Data from the *Report on Health*

b) Data from *Statistics Canada*, Interprovincial Migration Estimates.

NOTE: Even if population data deal with the past (1966-1975) they are nevertheless only "estimates." Calendar year.

The recent situation may be described as follows. Official statistics reveal a decreasing percentage of native people in both permanent and current population groups. After census, indigenous peoples comprised 78% of the territorial residents in 1941, only 53% thirty years later - from 78% down to 53%. Now, white residents and native people account for about 50% each. In fact, there are variations in the relative percentages depending upon the sources used: so we could argue a very long time if we are not using the same statistics.

The report on health gives as much as 57% for native people in 1971. Four points more than the census for the same year. Those who utilize the permanent population concept put the native population at more than 50%. Why do those who consider the current population concept arrive at the figure of less than 50%? The difference between these two systems amounts to approximately 4%. I cannot say today if there is more than 50% or if it is on one side or the other. It depends on the statistics we use and if you do not take position on the statistics we use, we cannot talk on that subject anymore.

Much less is known at the local level. In the communities this 50-50 division seldom exists. In most localities the main language is one or another of the Amerindian system. The concentration of white people in a small number of settlements explains why there are fewer dominantly English-speaking localities than settlements where a native tongue is widely spoken. In some sites, such as Inuvik, Rae-Edzo, Aklavik, Frobisher Bay, Norman Wells, Fort Smith and Yellowknife, one may hear linguistic tracings belonging to three, four or five languages. Around 70% of all Northwest Territories communities are mainly composed of native people. From 1976 to 1985 we offer some indications on the evolution of official ethnicity. According to table 3.9, (reproduced on the next page) which is confined to permanent population, native people will make up 49% of the population by 1985. The gradual decrease in numbers of native people may be followed this way.

According to Table 3.10, the percentage of native people will have decreased from 53% to 46%, a decrease of 7% from 1966 to 1985. During the years to come, Dene and Inuit together will lose their official majority position within the Northwest Territories, taken as a whole. I have not to stress the political consequences of that position. Indeed, the Dene and Inuit situations have to be considered separately. From now until 1985, the latter will have a much greater rate of increase than the former. By 1985 the number of Inuit will be double that of the Dene. Viewing all ethnic groups together, such evolution means that Dene and Inuit will respond to white immigration in quite opposite ways: the Dene in the middle North will become more and more quickly a minority. Demographically the dynamics of the Inuit inside the far North will delay the process of regional minorization.

TABLE 3.9
Ethnic composition, permanent population, N.W.T., 1976-1985

Year ending December 31	Dene	Inuit	All native groups	Others	% natives in total population
1976	8,310	13,922	22,232	20,922	51.5
1977	8,464	14,350	22,814	21,656	51.3
1978	8,621	14,797	23,418	22,438	51.1
1979	8,784	15,269	24,053	23,251	50.9
1980	8,959	15,766	24,725	24,093	50.7
1981	9,140	16,284	25,424	24,967	50.5
1982	9,330	16,827	26,157	25,880	50.3
1983	9,527	17,394	26,921	26,825	50.1
1984	9,727	17,981	27,708	27,808	49.9
1985	9,937	18,592*	28,529	28,826	49.7
Yearly change %	2.2	3.7	3.2	4.2	

*Calculation made before the census on Métis population; results still to be known in 1978.

Projection A.

TABLE 3.10
Ethnic composition, current population, N.W.T., 1976-1985

Year ending December 31	Dene	Inuit	All native groups	Others	% natives in total population
1976	7,812	14,723	22,535	23,965	48.5
1977	7,954	15,172	23,126	24,816	48.2
1978	8,105	15,651	23,756	25,704	48.0
1979	8,259	16,151	24,410	26,635	47.8
1980	8,420	16,679	25,099	27,600	47.6
1981	8,590	17,228	25,818	28,602	47.4
1982	8,765	17,800	25,565	29,648	47.3
1983	8,947	18,398	27,345	30,737	47.1
1984	9,137	19,022	28,159	31,861	46.9
1985	9,333	19,672	29,005	33,032	46.7
Yearly change %	2.2	3.7	3.2	4.2	

*Calculation made before the census of Métis population. Métis may represent about 4 per cent of the total population. Cf. Table 3.8.

Projection B.

Evolution of Demographic Concentration

A choice of classes of settlements had to be made. We have tried to group localities according to their factual demographic size. The thresholds we use are: less than 50 people, 300, 750, 1,500, 3,000, 6,000 and 15,000. To us these categories appear to be less arbitrary than the others. However, they may not apply to other parts of the Canadian North. How has the situation evolved during the last twenty years or so?

As far as settlements are concerned these three facts are obvious. First, there has been a general diminution in the number of all settlements by as much as 45% between 1961 and 1977; that percentage would have reached more than 50% without the recent back to the land movement. Secondly, settlements with less than 750 inhabitants were fewer in 1977 than in 1961 - the absolute number was reduced from 206 to 99. Finally settlements with more than 750 inhabitants increased from 4 to 16.

The movement is far more apparent when current inhabitants are considered. In 1961, as much as 70% of the population were still living in settlements with less than 750 inhabitants. The percentage was 43% in 1970 and 29% now. Thus one can see the upgrading of the most populous class: in 1961 it was the 50 to 300 group and now it's the group of over 6,000. This reveals a clear trend towards urbanization in its northern type.

From the present day to 1985 we foresee some minor changes for the class with less than 50 people due to the influence of the back to the land movement, and by 1985 more than one-fifth of the total population may be living in Yellowknife and nearly three-quarters of all territorial residents may reside in localities of more than 750 people. In 1961 one could have seen roughly one-tenth and one-third, respectively.

The middle North and far North have different characteristics. The middle North concept describes any northern area characterized by moderate nordicity. According to a northern index, the North Pole has 1,000 polar units indicating ultimate nordicity. The middle North registers less than 500 of these units. The concept applies especially to the northern part of the provinces, but there is a zone inside the Northwest Territories where mean annual northerness stands at a level of moderate intensity. That region located at the southwest section of the Mackenzie District, which extends from the 60^{o} boundary to Great Bear Lake and from the shield to the eastern rim of the western cordillera. In the Northwest Territories those areas not located in the middle North are in the far North. Any observer will realize that the population of the Northwest Territories is rather evenly distributed between the middle North and the far North. The Northwest Territories is the only political entity in Canada to show such a distribution. Middle North and far North are quite

different regions when one considers the degree of nordicity, the various ethnic groups, the proportion of white people, the size of settlements and the intensity of the modern economy. Middle North and far North are regional concepts which may be used as tools of definition for several purposes. I will suggest some of them. Table 3.4 (reproduced on next page) indicates the ethnic composition by zones. In the Northwest Territories middle North, 70% of the total population is already white. Inuit do not live there naturally, and for the last 20 years the Dene have been outnumbered by southern immigrants. Demographic and economic changes have not been favourable to the Dene.

In the far North the situation is much less insecure for indigenous people. There, white people comprise little more than one-quarter of the total population; most residents are Inuit. It is the largest indigenous cultural territory in Canada. In the next eight years the demographic projection will lower the percentage of Dene in the middle North but not that of the Inuit in the far North. There are great political consequences here.

We next turn to the tentative evolution of the labour market among Amerindians. A look at the 1967 to 1970 situation first, gives occasion for determining some characteristics of that complicated labour market without solving all anomalies. Fortunately the results of a comprehensive manpower survey completed ten years ago are available to us, but unfortunately, much of the information refers to both Territories. Many data are incompatible with most of the usual concepts of labour demography.

Table 3.21 (reproduced on next page) illustrates several points. First the non-governmental sector appears to be more important than its political counterpart, even if as a unit, either government were the greater employer in 1970. In 1967 the government sector accounted for 39% of the total employment. The high proportion of public administration personnel in the territorial labour force reflects the cumbersome aspect of any northern administration as well as state participation in resource industries, the distribution of sophisticated services to the dispersed population, concerns for ecology, and a relatively low proportion occupied by the private sector.

In the Northwest Territories the following groups of workers have been identified; first native people, second, the wintering, long-staying, or "anchored" white people, those who are usually tabulated in report on health and in the census. As a unit these permanent white people command the highest share of employment in the Northwest Territories, about 48%. Even if they are fewer in numbers than natives when the total population is considered, permanent white workers form more than three times the total number of employed native workers. The third group, lastly, are the transient whites, who are tabulated in Northwest

TABLE 3.4
Population of zonal divisions: Middle North and Far North, N.W.T., 1977 and 1985

Regions	1977 Total No.	1977 % Dene and Inuit	1985 Total No.	1985 % Dene and Inuit
Middle North	26,481	27	34,122	24
Far North*	21,590	73	27,915	75
Total/ average	48,071	48	62,037	47

Source: Calculation from N.W.T. Home Statistics for 1977 and according to the projected increase through Projection B for 1985 (Table 3.10). Rounded percentages.

*Includes the *Extreme North* which has a few hundred permanent inhabitants.

TABLE 3.21
Employment estimates by categories of work, N.W.T., 1967 and 1970

	1967		1970	
Non-governmental Sector		4,841		6,400
Mining	1,246		1,395	
DEW Line	660		600	
Merchants	445		483	
Construction	354		520	
Transport	339		526	
Mining Exploration	289		804	
Contractors	197		512	
Others	1,291		1,560	
Governmental Sector		3,206		4,975
Federal	2,792		2,511	
Territorial	263		2,264	
Others	151		200	
Total		8,047		11,375

Sources: G. Mauzeroll, 1973, pp. 1, 2, 7, 12 and 16.
J. Palmer, 1974, pp. 49 and 52.

Territories Housing Statistics and who compose the non-indigenous sector of the "floating" population. With the transfer of government to the Northwest Territories, (from 1967 onwards) this group has registered the most drastic change of any during these periods. In 1970, the ratio of all jobs held by the transients reached 38% at a time of high in-migration. The impact of external conditions on the North is once again being demonstrated. Nobody knows all of the specific fields in which transient white workers are employed but some of the main areas are government, crown corporations, exploration companies and professional consulting.

Concerning the supply of labour in the Northwest Territories from 1977 to 1985, by percentage the increase in the labour force will be greater than the total increase of the population for questions of structure of age; we can expect an even greater pressure than the present one for finding employment for these workers. The labour force will grow by 36%. During the next seven years at least 5,000 new jobs will have to be created in order not to increase the current rate of unemployment for natives and in order to maintain the migration anticipated in projections for whites. So, during the next seven years at least 5,000 new jobs have to be created inside the Northwest Territories.

And more perhaps. If native people would register the same rates of participation and unemployment as whites, another 5,600 jobs will be needed to cope with the territorial supply. It means 10,000 new jobs in the Territories for the next ten years. Such a speculative total number of workers represents three times the active force. How can we achieve that, I don't know.

My third and last section deals with some recommendations. I have grouped my recommendations in two sections; the first group is dedicated to politicians and the second to the researchers.*

To Politicians

1. Municipal status. The great increase in settlements of 750 to 1,500 inhabitants will lead to communities attaining the status of "village"; also, there will be an increase in number of "hamlets" and "towns". In some communities, these southern-type structures may conflict with native aspirations; we recommend moving with caution in this sphere. The government of the Northwest Territories will also have to be concerned with those many small localities which are still without local councils.

2. Lands on the periphery of present settlements. The increase of population will lead to occupation of lands surrounding presently inhabited areas, so a greater concern for their quality must be developed now. The Territorial Government must have overriding authority over these "ring" areas and pass agreements with local administrators. One specific need is for building lots.

*Editor's Note: Recommendations and conclusions to Dr. Hamelin's presentation are reproduced from the report.

3. Schooling. Ageing of the population will necessitate more new organizational efforts in the secondary schools than in primary schools. At both levels, government must be concerned with the wishes of the communities, and with the position held by people with respect to their cultures. Particularly, the increase in numbers of Inuit children invites reconsideration of the geographical location of technical schools open to them.(1)

4. Housing. a) For the aged. The relatively large increase of people over 65, together with the limited material aptitude of most families for keeping old people at home, invite government to set up special services for this sector of the population. These services must respect specific cultural customs of the various ethnic groups.

Housing. b) For all people. The number of new apartments has been too low for several years; the shortage extends to at least 100 units per year.

5. Unemployment. Five thousand new jobs will have to be found to cope with evolution if present rates of participation and unemployment remain unchanged. There will be a massive increase in the number of people from 15 to 30 years of age - people either already on the labour market or likely to enter it soon.(2)

Considering the low rate of permanent employment among native people, the situation will become more serious than it is now; particularly for young adults. The progression of this cohort through the population will not ameliorate the problem of unemployment in the immediate future. Having in mind such a massive supply of labour, researchers have suggested that new on-the-job training programs be organized. However, the whole system of native unemployment seems impossible to solve without a complete rethinking and reshaping of the Northwest Territories economy. Otherwise, northern Canada will have to live with it.

6. Special services for transient people. According to registrations for the Northwest Territories Health Care Plan, there were in 1976 alone, about 5,000 new registrants. The number of in-migrants varies every year, and the great majority of them soon leave. It is a major demographic event. In 1972, all migrants, moving both in and out, represented 36 per cent of the current population of whites and 51 per cent of the permanent population of whites. Such exceptional mobility has quick and profound repercussions in all social fields. The usual territorial "two-year budget" does not appear to be able to cope with that mobile situation, particularly in housing. We wonder if a lump sum of money, of course to be rigorously accountable, could not be set apart for facing that reality? Moreover, reception services should be set up in Yellowknife and Frobisher Bay which would serve as transient centres until temporary or final destinations for most migrants could be found. One of the duties of these services should be to keep detailed statistics on territorial in- and out-migration.

Above all, information and incentive programs should be launched, first, not to attract those who do not intend to live in the North, and second, to prolong the stay of those immigrants. A regulated migration system seems to be badly needed.

7. Outpost Camp Program. The authors of this report are concerned about the reshaping of the territorial ecumene by rapidly increasing the number of subsidized small settlements. We recommend that studies should be made to determine the optimum number of Northwest Territories settlements. These studies are now necessary in the light of new trends: Outpost Camps for natives and the "shift-work" system of companies or governments. Studies on "shift-work" localities have been made in Alaska and in the U.S.S.R. As far as Outpost Camps are concerned, the following items have to be considered: the legitimate wishes of native people to go on the land, governmental budgets, local biological capabilities, possibilities of sites for settling, liaisons with "parent" villages, the contribution to country food harvest, pollution, a lessening of services (e.g., schooling) among "campers" compared with what they could receive in a larger community. A kind of balance sheet concerning the OCP has to be written up. The whole question of the number of settlements has to be seen in the light of their evolution after cultural perspectives and technology have been considered.

Territorial politicians must be prepared to vote money for maintenance of sites which are recognized as valuable. Some native people are much involved in the Outpost Program; we wonder if all aspects of it can be dealt with by administrators alone or even by Members of the Northwest Territories Assembly? That body may consider itself to be in contact with native organizations. Other pertinent matters to mention in passing are information on biological reserves, additional cost for governments, minimum pollution regulations, awareness of consequences of education on the young, quality of life.

8. Major concentration on ethnic studies. We endorse this statement: "The realities of the North dictate that its population must be examined in terms of native and white peoples."(3) Even if the actual movement of the white population is not well known (i.e., concerning out-migration), demography on native people is indefinite; many studies have been undertaken according to southern concepts which can hardly apply to northern indigenous people. Therefore, a series of comprehensive studies on native people should be embarked on, but with the full support of those concerned.

Indigenous settlements, as well as white settlements, need to know in some detail what their population is. Without these resources, planning and administration are so much conjecture. The native groups themselves have to be introduced to the concept of demography. As far as white professional researchers are concerned, they must be attentive to the wishes of native people with respect to those conditions under

which Amerindians will permit outsiders to conduct their research. There is much more to the problem of good relations than confidentiality and the presence of one native person on a consultative committee. At the very least, reports made by white researchers should be made available in native settlements and in their languages (or a suitable abstract made of them or perhaps tapes).

We recommend four specific socio-demographic studies on native people. a) The first, dealing with the "kabloonization" (a similar concept can also be applied to Indians and Métis); such an anthropological study could help to make more satisfactory definitions of the respective native groups. b) Another study would consider the aspirations of native people for more political power, "inside Canada". c) The trend towards the small involvement of native people in white enterprises. d) The study of a more satisfactory dual system.

With respect to the white population, an ongoing study should be conducted on the "floating" population (i.e., non-permanent people, or short-term workers). Probably many kinds of individuals will have to be identified. In any event, these less-than-one-year northerners seem to inflate Northwest Territories population statistics by as many as several hundreds. When they do come, they create demands for temporary services. The floating population is part of the current population. The mental aspect also has to be considered. We endorse the following proposition: "In the interests of understanding and cooperation between ethnic groups, research should be undertaken on the attitude of white migrants to the North towards the native peoples and northern living conditions." [4] Those in-migrants who keep their southern address when they are in the North need to be better known and those who have the least propensity to become out-migrants should be identified.

About the Métis people, a thorough demographic study must be devised for completing some historical and anthropological studies already started, as well as the in-house survey made in Fall 1977 by the Métis themselves. Such information will be necessary for a land claims settlement.

9. Cross-cultural system. For a while, both native people and "Others" will make up about 50 per cent of the Northwest Territories population. It seems urgent to facilitate in all northerners a knowledge of all other northern cultures. Groups living side by side are all too often unaware of each other's cultural richness. A profound change of attitude in this respect is more than desirable. As soon as possible, comprehensive cultural programs must be set up for all levels of population: for children in school as well as for adults in settlements. Responsibility for such a policy should be shared by both white and native citizens. These cultural programs cannot come from the official education system only. We specify that we are thinking beyond mere translation facilities.

10. More MP's. If one could accept the present ratio of 15,000 territorial people to one MP - three, and maybe four (instead of one, in 1978), members would have to represent the Northwest Territories before fifteen years have passed. We are inclined not to apply the national standard pertaining to number of electors to northern areas, either territorial or provincial. The vast, multi-cultural North is insufficiently represented in the Canadian Parliament as well as in provincial legislatures; this situation seems to be less democratic and precludes the expression of legitimate opinion.

11. More members for the Legislative Assembly. If one could keep the present ratio of 3,000 inhabitants (slight increase of this number compared to 1975) to one seat in the Legislative Assembly of the Northwest Territories, ridings could be around 20 by 1986. Moreover, we suggest that the Northwest Territories Government and citizens make more intensive use of the MLA's.

12. Reshaping of territorial administrative regions. There are regional inequalities in population increases - another factor in changing boundaries of western administrative areas. In ten years' time, the Fort Smith region would represent 60 per cent of the total population of the Northwest Territories, which would be an unbalanced concentration of people. The northernmost boundary of that region could be in the proximity of Lat. 64 or at the middle North/far North boundary. It is a slight modification of the present four regions. A specific study on territorial regionalization should be made.

To Researchers

13. Comprehensive plan for demographic studies. We agree with the recommendation made by the Committee on Northern Population to the effect that one of the first steps in planning is to prepare a comprehensive demographic project for the entire Canadian North. In such a program, the Northwest Territories should receive major consideration. Collaboration between researchers coming from different ethnic groups and disciplines is imperative.[5]

14. 1981 National Census. We recommend that the 1981 National Census be organized in such a way as to collect more and better data on the North. Specific considerations are to be given:

a. to defining the basic statistical unit - in particular, Census subdivisions and enumeration areas;

b. to specific groups of people; Métis, southern migrants;

c. to particular questions such as spoken native languages, manpower and employment, northern residency, northern part of provinces.

Efforts ought to be made not only in Ottawa. Northern enumerators must be specifically briefed and northern people prepared to give accurate answers.

15. Northwest Territories Statistical Bureau. Logically there should be only one centralized data service for all government offices. One sector of that body should be concerned with statistics on demography. The personnel ought to be specialized in that field, with northern experience and sensitivity in political matters. Present facilities have to be centralized and enlarged.

16. Professional Library. An all-department library should be developed to collect all kinds of documents: data, resource books, archives, maps, photographs, under a suitable system of classification. The library should be adequately staffed with professional personnel equipped to answer questions from a variety of sources. Some of the acquisitions should be concerned with demographic problems. Present facilities have to be developed.

17. Historical handbook on recent demography. We propose that a comprehensive statistical account be prepared from the year 1941 to the present (1973 was the first statistical yearbook of the Northwest Territories), similar to the valuable work entitled Canada, edited by M.C. Urquhart and K.A.H. Buckley, Cambridge, 1965. Compilers must be concerned with the undercounting. Data from the recent past, and subsequent studies, will be necessary for improving the store of statistics, as well as advancing our understanding of present evolution in the Northwest Territories. This handbook ought to be prepared, not only from Census, but from all available sources.

18. Annual censuses. "In view of the short-term and medium-term variations, seasonal and annual censuses would be greatly preferable to ten-year or even five-year censuses. There is much too little premanence in the northern situation for one to be able to apply, at prolonged intervals, statistical tools designed to reveal trends in more stable situations."(6) The Territorial Government should take the responsibility for conducting these surveys.

19. Northwest Territories Home Statistics to be amplified. Ongoing surveys should be made of the total population and should include, specifically, permanent residents (at least twelve months), transients (from a few weeks to a few months), "shift-work" individuals, military personnel (as in Alaska). These surveys should include vital statistics: age, sex, ethnic orientation and family status. TERIS data and the annual list of population by settlements should be completed. The Northwest Territories must become the central collection agency for that part of the Canadian North.

20. Usual data to be classified. a) Migration data ought to be extracted from Family Allowances archives and given for the Northwest Territories specifically. b) The Report on Health should specify the number of transients to which it refers. c) The Northwest Territories should improve techniques for collecting data on the traditional economy.

21. Northwest Territories Yearbook. The Northwest Territories Statistical Abstract, produced by Ottawa, ought to be made in the Territories, beginning with the 1979 issue. Such a Yearbook should incorporate all that is pertinent to Northwest Territories situations.

22. Demographic information to be collected from written texts and tapes. We suggest that the massive, but very scattered, demographic information to be found in social sciences reports made by or through Federal or Territorial governmental agencies, university departments (theses and reports), private enterprise, indigenous groups, and individual writers should be classified. There are several hundreds of unpublished but available texts which have significant information on northern demography. Abstracts of some series (as, for instance, NORESSS) give an idea of the wealth of material available, but they do not produce information specified here.

23. Use of unconventional material. Researchers must be prepared to make greater use of unconventional, but nevertheless reliable, data compiled by the Health Care Plan and Family Allowances. Federal or Territorial departments which conduct many special surveys often gather data pertinent to the understanding of areas such as migration, manpower, tourism, cost of living and diseases.

24. On going mapping of the ecumene. Areas for residence (including temporary residence) and economic activity are variable factors in the Northwest Territories. It should be useful to have better data, both for winter and summer, on an annual basis. In part, research into this problem may be linked to the question of Canadian sovereignty and must take into account characteristics of native people and their living conditions.

25. Atlas of the North. If the project of an atlas of the Canadian North is to be realized, it should contain a major section on all Northwest Territories peoples.

26. Data processing. We recommend a more intensive computerization of data and the activation of the territorial computer terminal.

27. Monographic researches. We also propose that a fair number of specific studies be undertaken. For example, inquiries into the rationale beyond migration, the threshold in classification of settlements, housing, quality of food, the level of ill health among adults, higher education, economic base for every settlement, and young peoples' ambitions and perceptions.(7) A particular effort should be made to determine what will

happen to the population and the settlement at Nanisivik when mining operations cease, in ten years or more. Lastly, it should be useful to have another manpower survey such as the one made for 1960-1970.

28. Seminars on population for administrators. As soon as possible regular seminars should be prepared for northern politicians and administrators about practical demographic questions. Objectives should be to sensitize them towards hitherto neglected cultural matters, to encourage them to collect and improve northern statistics in their particular fields, and to increase the northern orientation of their territorial work.

29. Circulate information on demographic matters. We recommend that the Northwest Territories Department of Information prepare simple briefings, pertinent to the territorial population. Texts could be published periodically by northern journals, in Yellowknife and outside, in native languages as well as in English and French. Demographic knowledge thus circulated will provoke some feedback.

Mental Attitudes

30. Ethics. Researchers should be aware of the moral implications of their work, conforming to rules enunciated by the "Man in the Biosphere Group."(8) Consideration must be given to the wishes of the native people.

31. The global approach. The universality of problems should always be kept in mind. Rather than studying socio-economic topics in isolation, they should be considered in a broader context. Certainly, one would hope to see more integration between political and economic areas; the former is linked to social questions and administered by the Territorial Government, while the latter is based on natural resources and controlled or activated by the Federal Government (as well as by private companies). The dichotomy in politics influences development, which in turn influences the population. Once again, changes in mental attitudes would be the first step.

32. To proceed from the point of view of nordicity. Many analytical tools and concepts have been designed in the South to cope with northern situations. This southern approach to research should not be exclusive. Canada needs to enunciate a rationale which can be adapted to northern research.

Conclusion

It is our duty to remind our readers that our study and projections are based on inaccurate statistics. The Northwest Territories population includes five groups: white "permanent", Inuit, Dene, Métis, white "transient". Little is known about the last two categories which may represent as many as 15 per cent of the total number of inhabitants. Moreover, data

on many areas such as unemployment and rate of occupancy in housing are only approximate. The quality of the basic data precludes deep and detailed results. The second major difficulty in projecting arises from external domination of the Northwest Territories; decisions on mining, pipeline, airports, political transfer, land claims, defence, all of which will influence the future of the Northwest Territories, come from outside (i.e., the Federal Government and major companies) and are subject to secrecy until the last moment. In these conditions, our projections are tentative only; one need not place too much weight on the apparent precision of the tables, nor on the linear slopes of projected data.

However, in spite of these shortcomings in available data this paper brings some new insight into the fluctuations of the present Northwest Territories population, and indicates the basic trends for the next ten years in fields such as urban concentration, level of municipalization, ethnicity, ageing, schooling, migration and labour. As well, it offers recommendations dedicated to researchers or politicians.

NOTES

(1) N.W.T. Vocational Training in the Eastern Arctic, Yellowknife. Recommendation to the Legislative Assembly 1-65, 1978, 8 pp.

(2) From 1976 to 1985, according to Projection B, 31 per cent of the total increase will be people from 15 to 30 years of age.

(3) Bone, R.M. and Foster, T., Saskatoon, 1976, p. 37.

(4) Canada, Science and the North, Ottawa, 1973, p. 17.

(5) Siggner, A.J., "A framework for demographic research on the North", Proceedings, Northern Population Workshop I, 1977, pp. 72-86.

(6) Hamelin, L.-E., in The Musk-Ox, 10, Saskatoon, 1972, p. 7. Translated from French by W. Barr, Cahiers de Géographie de Québec, 33, 1970, p. 314.

(7) George, P., 1976, pp. 24 and 39.

(8) Canada, Ethical principles..., Ottawa, 1977; M.R. Freeman, "Science and Ethics in the North", Arctic, 30, 2, 1977, pp.71-75.

Robert Bone

Thank you very much Dr. Hamelin. That was a succinct review of a very complex document. Without further ado, the first speaker to comment on Dr. Hamelin's paper is Don Stewart.

Don Stewart

Science Advisor

Northwest Territories Science Advisory Board
Yellowknife, N.W.T.

Thank you Bob. I am not going to comment on Dr. Hamelin's paper directly. I think it might be of interest if I took a few moments to explain its background and to say a few words about the Science Advisory Board of the Northwest Territories - who we are, why we picked demography as the first major thing to study, and then I will explain how we are proposing to highlight the principal conclusions of Dr. Hamelin's paper for the Legislative Assembly.

The Science Advisory Board of the Northwest Territories is a creature and servant of the Legislative Assembly. It was created in 1975 by a private members' bill introduced by Tom Butters. That was really the culmination of some years of discussion, thinking and pressure, in what was then the Territorial Council. The real driving force behind this activity in the early stages was one of the last-appointed members of the Territorial Council and a member from Quebec City, Louis-Edmond Hamelin.

So the Board was created by ordinance in 1975 and actually came into being in 1976, with nine members. Under the terms of the ordinance, five members, 50% or over, have to be resident in the N.W.T., so five of the nine are. At the present moment we have Mike Kusugak from Rankin Inlet, Albert Canadien from Fort Providence, chairman of the settlement council there and former band chief, Frank Hansen from Inuvik, one of relatively few native engineering graduates - the only one I know of in the Northwest Territories - and a couple of us from Yellowknife who have been there for a long time. And there are four people from southern Canada who bring a very wide range of expertise to the Board.

The mandate of the Board is spelled out in the ordinance. Briefly, it is to consider what advice and information is needed, and to offer advice to the Legislative Assembly in all areas related to science, engineering and technology. The Board has got a good deal of leeway in interpreting this mandate because it doesn't get very much guidance from the Legislature and we didn't really expect that we would in our early years. Our work has been divided into two areas.

One is the initiation of studies which we think will be of relatively short term, practical concern to the Legislature and to northern people. These are areas where we might contribute positively to the lifestyles and living conditions in the North in the foreseeable future. What may not be totally obvious that demography falls into that category. We felt it was the top of the list because anybody who is going to plan for the future needs of the Territories has got to think in terms of who the people of the Territories are going to be, how they are going to live and the size of the communities they are going to be in. Otherwise you're planning for something that is unrelated to reality.

In other areas, we've undertaken a family of studies on renewable resources, there are three papers in press now on that subject. There is a paper examining the nutritive values of traditional foods in comparison to some of the substitute foods which are now being used and that paper is complete and now in the hands of referees. We have done some work on the heavy metals which are known to be contaminating a number of traditional native foods and the significance of these contaminants as far as we can now discern. We've also taken a major interest in programs for conservation and other sources of energy because the high cost of energy and the problems associated with it, like consumption of energy is one of the major factors in keeping people in the Northwest Territories from being truly independent. The cost of utilities is so high that even if you gave somebody a house he can't afford to own it and maintain it himself. And therefore energy is a very high priority. The other thing we're trying to do is to influence the whole realm of northern science and make it more responsive to northern needs and to develop some roots in the North so that northern people can become part of the scientific process.

When the Board was established we looked for someone who could undertake the demography project. I phoned Dr. Hamelin and his response was that of a conscientious scientist. He said that it is impossible at this stage to do an analysis of northern demographic data because the data are not of adequate quality. I am afraid I twisted his arm and said that although the data are not what we would like them to be, they do tell us a lot. Data don't have to be perfect to be usable to decision-makers. I think that the people who are involved in demographic research are carrying on with their work, going from the present very inadequate information, in parallel with those of us who are using your results - we just can't wait for the best answers. I'm not standing here before you as a demographic expert, I'm a customer. So with a little bit of arm-twisting we did persuade Dr. Hamelin to take on this job and we're very pleased that he did. I fully accept responsibility for the fact that the terms of reference were impossibly broad. That was deliberately done to give Dr. Hamelin the scope to pick out of this morass what he felt was most important.

All this has happened and the report has finally come off the press just as of last week. The work was done close to two years ago now and the Board is faced with the task of presenting the essential parts of this massive data to decision-makers who are not prepared to wade through the material in a scientific report. So the Board itself has prepared for the Legislative Assembly and for any other decision-makers who are interested, a very short paper, I think it's 8½ pages of text, double-spaced, which highlights demographic trends as we see them and the significance of these trends to decision-makers in the Legislature in particular.

Somebody asked me last night if the Board's paper disagreed with Dr. Hamelin's paper. My answer was "No". The numbers are different but we don't disagree. And the reason the numbers are different is because our report was done a year later and in that year a number of things happened which couldn't be foreseen. There was a net out-migration from the Territories; there was continuing evidence of a definite decline of the birth rate and we were able to use later figures for birth rates. The projections used in this report rise somewhat less steeply than those in Dr. Hamelin's report and if somebody were to do another analysis a year from now they would get a different set of projections. We aren't saying that these figures are what's going to happen, we're just saying to decision-makers that if present trends continue this is the kind of society you're going to have to plan for.

We did two projections. One is based on the assumption that there will be no net in- or out-migration from the Territories. In other words, some of the people who are there now will leave and others will come to replace them. A fellow will quit his job, move his family out and somebody else will get hired to fill that job but there will be no increase as a result of migration from the outside. That is probably a pretty conservative view of the population growth. The other projection is based on a net in-migration of 555 people per year, which is a bit arbitrary because the data aren't that good, but it is some kind of an approximation of what the level of in-migration was prior to the relatively recent sharp drop off. Neither one of these projections covers the scenario of a massive development and the very high - at least temporary - in-migration you would get if that happened.

It is possible that population growth rates very much higher than the projections might take place. The 1978 population we considered was 46,400, looking ahead ten years we're looking at 54,900 in 1988 if there is no net in-migration, 60,400 if there is. Going ahead twenty years - and I emphasize that we are not saying this is what's going to happen, we're just saying this is the direction in which things seem to be moving - there will be 65,100 with no net migration, 76,200 in the other case. The only other thing I would like to do is highlight for you the things <u>we</u> have highlighted. Dr. Hamelin has already commented on the more important conclusions so what I'm saying now is repetitive except just to point out that these are the things we think are the more important.

Firstly, in ethnic distribution, the suggestion that Dr. Hamelin made that you separate the Territories by the tree line is entirely valid. Above the tree line, it is hard to conceive of a scenario in which the Inuit would not remain in a strong majority position for as far ahead as anyone dare make predictions. The birth rate is dropping as all birth rates seem to be dropping but it's still substantially higher than most other birth rates in the country and the probability of any massive migrations from southern Canada to the Arctic just doesn't seem realistic. So that can be taken as a reasonably secure conclusion for a good number of years to come.

Within the tree line there is probably not much doubt that the Dene will continue to be in a minority with a high probability of being an even smaller minority. This is based on the assumption that the number of native people moving out of the Territories will be negligible which it certainly has been up to now. It may be a rather dubious assumption. For example, in Greenland, the contact between the Greenlander and southern Denmark has been much longer and there is now a marked tendency for some of the most competent, best educated, brightest young native people to go to Copenhagen for a vacation and not come back. That hasn't happened yet in the Northwest Territories but it is something that we should be concerned about in the next generation. If it were to happen it could rob the present communities of some of their best potential leadership.

Age distribution is of course a key thing. All across the western world society is aging. This is very definitely happening in the Northwest Territories and this is a very important thing for decision-makers to consider. Over the last twenty years we have had to give a very high priority to developing and expanding the school system, both because there wasn't one, or there certainly wasn't much of one twenty years ago, but also to keep pace with the very rapid growth in the school-age population. The growth of school-age population looking at the 5-14 age group which breaks out easily, in the next ten years is about 100 for projection "A" which is practically negligible, or 800 for projection "B". That is not to say you don't have to build any schools because maybe the present schools aren't all in the right places and quite possibly there will be an increased retention of young people in the school system, but it means that we don't have to give the same priority to a gross expansion of the education system that we had to do in the past.

The thing that stares out of these figures as Dr. Hamelin has stressed and I think should be stressed over and over again, is that the greatest need in the near future is going to be to provide opportunities for people. In projection "A" there will be a need in the next ten

years for 6,600 opportunities. Projection "B" shows a need for 10,900. The difference between "A" and "B" is only in-migration, so that means for all the people now in the Territories, not including the ones which Louis mentioned who are now inadequately provided with opportunities, just to be in the same bad position, we need 6,600 more opportunities. Now if we get them by expanding the economy and that results in in-migration then whatever number of jobs are taken up by the in-migrants have to be in addition to this 6,600. You don't solve your problem by just bringing in in-migrants and giving them jobs.

These opportunities don't have to be all in wage employment necessarily, of course. There will be housewives. Whether there will be an increase in the number of people living off the land is pretty debatable but if the people choose that lifestyle, fine. The same people that require employment opportunities require housing and the numbers there get pretty horrendous too. One just assumes that you need a house for every two people, that is two people approaching adulthood and that is an over-simplification. But maybe a good round figure would be 3,000 housing units which will be needed just for the people who are now in the Territories.

At the present time there are few elderly people in the Northwest Territories. The number will continue to be small by southern Canadian standards but there will still be a 75% increase within ten years and a threefold increase in twenty years, which means that we are going to need a much greater emphasis on programs for elderly people. We now have relatively few because the needs are limited. We'll have to look at a whole new program area.

The other thing which falls out of the study which Louis mentioned in some detail is community size. A lot of things happen when people migrate into larger communities or communities expand but one community of 3,000 people is not at all the same thing as six small communities of 500 people. The social structure is different and the social conditions become drastically different. Even the infra-structure needs may be different in that the kinds of services you need for larger communities, the calibre of sewage disposal systems and water systems and so on may well be different. The proportion of the population that can live off the land is obviously much less because, as we have already found, when you have a larger community, the area around it which is readily accessible to the community, very quickly becomes over-harvested. You can't maintain a traditional lifestyle in an urban setting without massive transportation costs.

Those are the things which we felt were most in need of highlighting to the members of the Legislature. We hope that these papers will be tabled in the February session and discussed as part of the process of making sure the decision-makers really plan for the kind of world we're going to live in.

Bob Bone

I would like to introduce Dr. Trevor Lloyd of the Association of Canadian Universities for Northern Studies who himself is a senior student on the Canadian North and other northern countries. Dr. Lloyd has a special interest in the Canadian territories and has been following the demographic developments since Workshop I with great interest and has taken special interest in Dr. Hamelin's report so I am sure we're going to be entertained by some very fine observations on demographic change, particularly as they pertain to political consequences of population changes in the years to come. Dr. Lloyd.

Trevor Lloyd

Executive Director

Association of Canadian Universities
for Northern Studies
Ottawa, Ontario

First of all I should thank Dr. Bone for allowing me access to this podium. I spent the last couple of years behind a desk being a bureaucrat and I miss those nine hours so a week standing and talking to audiences. As Professor Bone probably realizes, it is quite a risk when you let a person up here who hasn't been doing very much of this kind of think; he may have forgotten just how to stop. With that in mind I have limited myself to just a few pages of typescript.

It is customary for bureaucrats to clear themselves by saying that they are not speaking on behalf of their organization unless, from the dullness of what they say, it is obvious that they are. As my employers are 28 universities scattered from coast to coast, it would be impossible to get agreement from them on anything, so they have no idea what I am going to talk about and certainly it doesn't represent their opinions. Some of you who have been around quite a long time will recognize the opinions as very much my own. They have been repeated more than once elsewhere.

First I want to congratulate Dr. Hamelin on his courage in taking on this job when he has a university and much else to manage these days. He did it in his usual capable style and I suspect it is going to be a landmark in population studies in Northern Canada which no one will be able to ignore from now on. Others will build upon it because it has done the essential job.

It is also particularly interesting to see an administrator follow the academic report and give some clues as to how the policy has to be built on these elaborate studies. There may be some slippage between the administrator and the original study but that is a necessity of planning.

I have been very impressed, in my few connections with the Soviet Union, by the manner in which the scientists are expected to serve the community. I might add that they do it faithfully but they're also paid for doing it at so much a page. No one in the Soviet Union

ever does anything for nothing. But in addition to doing the fundamental research and producing a monograph, in fact producing a textbook and a series of articles, there is an obligation on anyone doing any major study to provide the essence of it in pre-digested form, so to speak, for the public, the interested public. You find an enormous number of paperback books in technical and other bookstores in the Soviet Union interpreting these studies. I would think that in the light of the rising educational standards of the Northwest Territories, the improvement in the school system, the use of radio, T.V. and satellites for community information, it might be a good idea to get someone who is a writer, essentially a journalist, to take the essence of what we have had presented to us and make it available, not in one booklet but in several leaflets. For example one of them would need to deal with the essence of demography, of population study because even the educated members of the public have no idea of its significance nor in fact of its contents. This would be like a little textbooks for the Northwest Territories. A second would supply the essence of what Dr. Hamelin has produced, and finally, something could be written from the point of view of the Legislator and the administrator as to what on earth one can do with this kind of information in the next ten or fifteen years. I suspect that the public can absorb that stuff much, much better than most of us assume.

So much then by the way of my introduction except to congratulate the Science Board upon having set this work going and all those who helped to make the study possible. Also this workshop is very important indeed. These gatherings that bring together research results obviously lead to new research and new developments and I say good luck to the whole project. Now I will read my text and, like the Scottish Presbyterian minister reading the Bible, I will improve on it from time to time.

In the presence of so many demographers, I take considerable risk in uttering a warning to all those who conjure with population data. I am speaking here in generalities, I have a license to wander.

First, we should remember that the demographic game is not played for its own sake. The purpose is to make practical contributions to the peace, order and good government of the community and to aid in its economic, social and political development. And above all the purpose to advance the welfare of those being studied. As Milton Freeman pointed out in his 1972 Mont Gabriel paper - another landmark paper that should be looked at by everyone - the gathering of data from and about individuals is potentially an unwarranted intrusion upon their privacy. It should only be done when the people themselves recognize that there are real benefits to them. The suggestion has been made, for example, that there should be an annual census, that is to say a toe in the door once a year, recording of details of household occupancy and the utilization of schools and health services as gathering grounds for even more data. These ideas need to be watched carefully.

Now I am going to say something that may upset some of you but I think it has to be said. So-called "ethnicity" can also be treacherous ground and can, of course, produce nonsensical results. Too much interest in it can lead to activities and conclusions that are political rather than scientific. It may lead to divisions in the community when the real need is to break down barriers, not to heighten them. As an example of nonsensical results, I can tell you a story. I am one of those rare birds, having no great ability and therefore having to work twice as hard, who wrote two doctoral theses and one of them dealt with the Red River Valley of Manitoba and the other one dealt with the whole of the Northwest Territories. And in the Manitoba thesis, done in the late thirties, I had a chapter on the ethnic origins or the national origins of the settlers in the Red River Valley in Manitoba. And going back over the censuses I found a very odd situation in southern Manitoba. Here were a lot of Russians in one census area, in 1911. In 1921 they were Dutch, my map showed a mass of Dutch. In 1931 they were Germans. They were all actually Mennonites. The first census man went around; he knew all about it, he knew these people were all new immigrants, and where they came from, they came from Russia, so they were all Russians. Then came the First World War and these people had learned a good deal about the country and one thing they had learned was it didn't pay to be a German, and so as their leader, Mennon, was of Dutch origin and the religion came from Holland they all recorded themselves as Dutch. By 1931 they had more confidence about their affairs and they all appeared as Germans, and they were exactly the same people. That is a very crude example of what can happen as far as ethnic things go.

I have for nearly fifty years now being faithfully proclaiming myself Welsh in the Canadian census, just to have one at least in the record of "other" whenever the things were printed. It's perfectly true, and goes back a very long time, but it is obviously vain and foolish. Now, I had a friend in Winnipeg in the thirties who resented very much this particular clause in the census. He objected to having to say that he was Scottish. He said, "My people have lived for seven generations on the Red River Valley and I'll be damned if I will say I am Scottish - I am a Canadian". And the census taker said, "You'll go to jail if that gives you any pleasure". So down he went as a Scotsman.

Our breakdowns now into ethnic groupings in the North seem to be rather more realistic than that. But the time is not far off when they will probably be about as bad as the Scotsman or myself and in the same directions. There haven't been any Laps registered in the Norweigan census since, to my knowledge, sometime in the early 1930's. Greenland natives are not registered in Greenland - the distinction is born <u>in</u> Greenland or born <u>outside</u> Greenland and it is really a relic of other things that right across the southern part of this country we have all these fabled ethnics. I beg of you to keep that in mind and wonder whether it is entirely wise to place new stresses where they may not always be necessary, quite apart from the impossibility of defining ethnicity. Language is another matter - you either speak it or you don't speak it and can record it accordingly.

My own view has long been, as far as the eventual evolution of the aboriginal population of Canada is concerned, that the traditional way of life is doomed in the not distant future. The economic basis is disappearing, the old languages will eventually follow. To say this is not to wish it, nor to deny their historical interest. Diamond Jenness, a great friend of the Inuit, pointed out in the 1930's that the essentials of the Eskimo way of life were then no more, those looking backward were admiring the fox-trapping era created by the trading companies. Knud Rasmussen agreed with his view saying that once an indigenous peoples' feet were on the pathway to civilization, - that is the old phraseology - there was no way back. It is interesting to read in the recent book by Ernie Lyall of Spence Bay, that he, with two generations of Arctic living, believes that the traditional Eskimo way of life is rapidly passing. He points out that in his community, and he has the records because he is the man who keeps them, the most productive trappers are weekend hunters usually employed by government, using the skidoo to complete their appointed rounds.

Another word of caution that cannot be repeated too often is a reminder of how very, very small the number of people being dealt with is, and how shaky the census base, particularly as it is recorded in mid-summer when people are rather fluid. Major population changes are happening very rapidly. The effects of universal public education are yet to be felt. What effect will they have on people's desires to do this or that, go here or there. The present stagnant industrial and commercial situation may persist or it may vanish almost overnight bringing phenomenal changes. The full impact of modern transportation and communication is yet to become apparent. We must remember that, unlike Greenland, the Northwest Territories is not an isolated geographical region. It is part of North America, it is wide open at the bottom and any attempts to seal off the 60th parallel are certainly doomed to failure.

As far as long-range forecasts are concerned we do not yet have the essential data and I don't mean numbers of population only. The economic basis for life in the North has not yet been determined. No one is going to tell me that 10,000 new jobs are going to be found in that area without an economic and social revolution. The social revolution may be in moving most of the people out, or people moving themselves out. But we don't have the facts yet available to forecast beyond a very limited distance. The political arrangements are yet unknown.

About fifteen years ago when some of us were talking to the Carruthers Commission people privately, we insisted that politics, as far as administrative arrangements are concerned, depends on economics and an economic and social way of life and that anybody who draws lines on the map without knowing those facts will do what has been done in Canada in the past where someone took a line of longitude or a line of latitude and simply drew a line along it. You get the line between Keewatin and Mackenzie, for example. We begged them not to draw any

political lines or make any political rearrangements for at least fifteen years until the economy and the social developments had shaken themselves down. In the fifteen or so years that have passed, the North has become an entirely different place from what Mr. Carruthers and his colleagues were working on. How fortunate they were and the country was, that no such recommendation was made.

Urbanization has happened in the Northwest Territories, and I am one of those who believes strongly that it was done far too rapidly. There is, I think in this library and scattered around the country, a microfilm of the study I made between 1943 and 1947 called The Geography and Administration of Northern Canada, another of those "all about everything" topics. It attempted to forecast the sort of change that could be anticipated from an administrative point of view. I read it now as if somebody else had written it in the far distant past. It attempts to show a gradual transition from a nomadic population which existed in the middle 1940s, through the inevitable urbanization that would take place in the distant future. I even had the school teachers travelling around with the hunters. That was not my own idea. It was what the Swedes did with the Laps, and as the people got more accustomed to the early grades of school from the nomadic teacher then they gradually were brought together for more grades in a semi-nomadic, semi-permanent school, and so on. Obviously I feel urbanization took place much too fast but it was done with the best will in the world and for what were thought to be the best reasons.

There was an alternative to what was done but it would have taken fifty years to bring about and politicians need to get re-elected more often than that. Those who preached the move to the larger settlements for good, social and humanitarian reasons were ill-equipped to foresee the consequences. The time scale was wrong but the process was inevitable. I see no reason to change my own long-held view that the population of an area such as the Northwest Territories will become almost entirely urban. Economic, social and political forces and personal preferences continue to make this so. Governments with plenty of spare money may slow the process by subsidizing minor dispersals of people here or there, but the overall pattern will not be altered. The "commuter" industrial worker system is here to stay because it fits the needs of the workers who live in town and the ideosyncracies of mineralogy that disperse the resources. It is an automatic adaptation to social and economic reality. All this said, it remains of interest to attempt population forecasts so long as they are macro and not allowed to restrict future developments.

Dr. Hamelin, with his thorough knowledge of the Northwest Territories and his command of population data and also his feel for the North which is not exclusively irrational, should compile a single map showing the population pattern as it may be in the year 2000. Anyway, most of the map will be empty. What matters is where the populated points will be and what their size is likely to be. Much will depend on transportation and the economy. My guess is that the latter will be strongly influenced by non-renewable resources, habitability, service industries and government funding. And the map will eventually be a natural extention of that of the rest of Canada. I should confess that I once tried the exercise myself, though with negligible population data. This was done in the 1943-47 period before the onslaught of government administrative fiat. It all looks rather sad now.

Now a few minor points that I would like to pass on to you. I think it is a pity that people referring to the population data for the Northwest Territories over a period of years usually omit a paper by Dr. J.L. Robinson, now of U.B.C., published in 1944, in that unexpected location, the Canadian Geographical Journal. Dr. Robinson was the first scientist ever employed by the Government of Canada to do serious research work on the North with a view to foreseeing things. The only reason he got his job was that there was some spare money in the one liquor commission store in the Northwest Territories, namely Yellowknife, and this was the only money commanded by the Northwest Territories Council, so Lou was paid out of the liquor profits. It's a very interesting paper for two reasons. It doesn't stand up to modern demographic standards. However, it indicates the sparcity of data even after the 1941 census, and it indicates the enormous changes that have gone on between then and now. It was also the first time that I know that administration had ever invited any data at all as a basis for planning the future development of the country and this was forced on the Northwest Territories Council which then met in the Deputy Minister's office in Yellowknife.

I made a study about the same time and had an advantage. I discovered, I forget how, that the census had forgotten 250 people, those living around Igloolik, so you have to be careful when using the 1941 census data, and check whether or not the people of that area are in it or not. They were not in 1941, some of the work was done in 1942 and 1943 as the government representatives went wandering through the Northwest Passage. So don't build too seriously upon those data.

I would like to add a point that is not connected with anythink I've said or anyone else has said, but may plant a demographic idea in someone's mind. It was once said to me by the man who governed Greenland at the time, that we can give you figures on anything, we can tell you how many prunes were consumed in any town in Greenland since 1900 if you want to know. They have masses of data and as, in a sense Greenland is running a stage ahead of Northern Canada, became urbanized

earlier and its population data are readily available; it might be worthwhile for someone to take a look at them and see if there are any lessons in there for us, about changes in birthrate, aging population and other matters.

One must remember there are other data besides those provided by the official census and I don't know how many demographers working now in Northern Canada have wondered about the Hudson Bay Company records. I don't mean 400 years ago - I mean 50 years ago. After the 1951 census, I made a map of Alaska, Canada and Greenland, using 1950 data for Alaska which showed all the Inuit, Eskimo, Greenlandic population. It was an enormous job because although the data existed, in the case of Greenland we coundn't find the places. There were so many towns with the same names that nobody could tell us which of them the numbers applied to. So we set up a system of getting local people to make sketch maps, where the numbers in the census applied to. And in this way we were able to make a map. We arrived in Greenland before the population change took place with a major effect - the urbanization. In Northern Canada, the same. And to illustrate how primitive the data were about 1953 I think, you will find that Cumberland Sound on that map has got a great deal of detail in it that other places don't have. Why? The census didn't provide the detail. But on a visit to Pangnirtung I noticed that the fur-trader had a very fine map that he had drawn up in his little office, with all the campsites and the population of them, all his customers. With the assistance of that, I interpreted the data from the 1951 census and dispersed it around Cumberland Sound. In other words, that kind of information is probably available, much of it in the fur division of the Hudson Bay Company for the 1930s, 40s, 50s and so forth. But that is one point we shouldn't forget.

Now the other point I want to make about Greenland is that they have had these detailed records since 1800. A medical man was instrumental, two or three years ago, in starting a major demographic study of Greenland. He was very concerned about the genetic diseases in a community which has been intermarrying for a very long time. Glaucoma, for example, is one of them. And he wanted to know if he could find out who was related to whom, and then of course it turned out that not only the church had all the records, but the tradesmen had records of all the hunters and where they lived. And they started to work building geneological tables, family trees, for a large number of families in Greenland, and eventually hooked into it for all of them except in the East and the far North where they don't have the data. Now that may not be applicable to northern Canada but it's a germ of an idea that might be useful to someone.

One last thing about Greenland while I am talking and I don't want to put the pox amongst the pigeons as the saying the goes, but it's something that arose from a study I made about the population and territorial ownership. I discovered what I should have known - and didn't - that there is, has been and is now, no land title in Greenland. Nobody has ever rented anything, nobody has ever bought anything - all the land in Greenland since time immemorial has been in the public domain. The Vikings of a thousand years ago - they as farmers introduced land titles. But the native people never had any land titles and when I raised this, it was pointed out to me that in the Eskimo tradition, land ownership in the sense that we legally think of it didn't exist. It is a product of an agricultural civilization. Wherever farmers went they mapped out the land because they wanted to get the land the next year and the year after, if they were going to work on it.

I have spoken too long but thank you for the microphone.

Bob Bone

Trevor, another very enjoyable talk and I find your observations, based on many years of study and thought, still provocative. God knows what will happen with the land questions that you raised; I shudder to think.

Professor Robitaille is a member of the Département de Démographie at the Université de Montréal and is extremely interested in northern population research and in migration in particular. He has been active in the northern population workshops and it is with pleasure that I turn the podium over to Mr. Robitaille.

Norbert Robitaille

Département de démographie
Université de Montréal

Avant de commenter le rapport intitulé Contribution to the Northwest Territories Population Studies 1961-1985, j'aimerais préciser le point de vue que je vais adopter. Je ne suis pas un spécialiste des populations nordiques; je suis un démographe, spécialisé en perspectives démographiques, intéressé aux populations nordiques. Il n'est donc pas de ma compétence d'apprécier ou de critiquer un choix spécifique des données par rapport à l'ensemble des données disponibles; je dois me contenter de commenter le traitement qui en est fait. J'essaierai donc d'apprécier la cohérence interne de ce rapport en prenant pour acquis que les données qui y sont présentées, sont un fidèle reflet de ce qui est disponible du point de vue statistique.

Le rapport que nous analysons aujourd'hui s'est donné "pour triple but de dégager les caractéristiques récentes, de prévoir l'évolution décennale et d'établir des recommandations auprès des politiciens et des chercheurs" (page ii). L'organisation du rapport en quatre points correspond très bien à ces trois objectifs. Dans un premier chapitre qui consiste en une revue de la situation démographique des Territoires du Nord-Ouest, l'auteur rassemble et analyse sommairement des données concernant les situations démographiques passée et actuelle.

Dans un second chapitre, l'auteur pose tout d'abord des hypothèses à partir desquelles il projette ensuite deux séries de populations. Ces deux projections couvrent la période 1976-1985 et ventilent la population par groupe quinquennal d'âge, sexe et groupe ethnique. La projection "A" cependant ne couvre que la population "permanente", (un an ou plus de résidence) tandis que la projection "B" dite "courante" comprend également les personnes ayant entre trois mois et un an de résidence.

Dans un troisième chapitre, les résultats précédents sont commentés et les implications qui en découlent sont brièvement analysées. Enfin, le chapitre 4 consiste en une série de recommandations aux politiciens et aux chercheurs.

Le grand mérite de ce travail est, à mon avis, d'avoir organisé un ensemble disparate de données ce qui permet une discussion à partir d'un texte de 50 pages plutôt qu'à partir d'une centaine de documents. Cependant, je ne vous cacherai pas mon désaccord avec plusieurs éléments de cette structuration; jetons donc maintenant un regard critique sur les principales étapes de ce travail.

J'ai tout particulièrement apprécié la partie du premier chapitre, résumée dans le tableau 1.1 qui traite des différentes estimations de la population qui vont de 39,358 à 47,410 suivant les sources. Une grande partie de cette différence semble être dûe au fait que dans la seconde estimation sont incluses des personnes dont la durée de résidence est courte et qui considèrent vraisemblablement leur lieu de résidence comme étant ailleurs que dans les Territoires du Nord-Ouest. Confronté à sept estimations de la population des Territoires du Nord-Ouest en 1976, le lecteur est obligé de se poser une série de questions.

Cependant, dans ce premier chapitre (et par la suite également) s'est glissée une erreur méthodologique qui rend gênante, à mon avis, la lecture de la suite du rapport. Pour calculer l'accroissement annuel relatif, l'auteur divise souvent celui-ci, calculé sur une période de plusieurs années par ce nombre d'années. (1) Ceci entraîne parfois des biais importants. Ainsi la population de Hay River qui a crû de 1956 à 1978 de 1,528 à 5,920 se voit attribuer un accroissement annuel moyen de 13% au lieu de 6.3% qu'elle a connu. Avec un accroissement relatif annuel de 13% elle serait passée de 1,528 à 13,789 durant la même période.

En dépit de ce biais méthodologique, il ressort de l'analyse de ce premier chapitre que l'accroissement de la population depuis 1966 a été rapide et que l'accroissement naturel a été environ deux fois plus fort que l'accroissement migratoire.

Le second chapitre pose les hypothèses et calcule des perspectives. A mon avis, les hypothèses sont trop éloignées de l'analyse de la conjoncture faite au chapitre 1. Alors qu'on n'a jusqu'ici jamais parlé de taux global de fécondité générale, on utilise cet indice, calculé apparemment sur la période 1973-1976 sans qu'aucune source ne soit donnée, pour fixer le niveau de la fécondité des perspectives. En soi cette méthode semble justifiable, cependant on aimerait avoir plus de détails quant aux sources et aux résultats (nombre de naissances, par exemple) pour pouvoir juger de l'hypothèse. Pour ce qui est de la mortalité, la méthode semble moins justifiable; en tout cas, elle n'est pas justifiée. On applique un taux de mortalité à chacun des groupes ethniques puis on répartit les décès ainsi obtenus dans chacun des groupes d'âges suivant une répartitition fixe <u>indépendante de l'effectif</u> (p. 11).

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(1) Voir Note 1 à la fin du texte.

On procède de façon analogue pour projeter le solde migratoire ce qui dans ce cas est justifiable par le fait que celui-ci est beaucoup moins dépendant des effectifs de chaque groupe d'âge que ne peut l'être la mortalité.

Pour résumer les critiques qui précèdent concernant l'élaboration des hypothèses, je dirais que le lien qui devrait unir la conjoncture et les hypothèses est trop faible et que la méthode de projection n'est pas toujours heureuse.

De plus, vu la fragilité des données, il serait à mon avis, intéressant d'offrir au lecteur de ce rapport, un éventail plus varié d'avenir possible. Je crois qu'il est souhaitable que les perspectives de population comprennent une série que l'auteur considère comme plus probable. Cependant, il est habituel de présenter ce qu'on appelle en jargon démographique une fourchette à l'intérieur de laquelle, de l'avis de l'auteur, l'avenir devrait se situer.

Enfin, ma dernière remarque se rapportant au second chapitre concerne les deux séries de populations projetées, soit les populations permanentes et courantes. Je ne comprends pas comment logiquement la population courante qui comprend toute la population permanente peut être inférieure à celle-ci ce qui est le cas pour les Déné et les Inuit.

Le troisième chapitre concerne les principales implications de la situation récente et des projections pour la période 1961-1985. Il serait, à mon avis, préférable d'étoffer un peu les perspectives avant d'en tirer des conclusions. Par exemple, dans la section traitant de la distribution suivant l'origine ethnique dans la population, on en arrive à la conclusion que les Déné vont devenir une minorité, de plus en plus rapidement. Avant de commenter un tel résultat, je crois qu'il faudrait tenter d'évaluer la probabilité d'un tel processus. Dans ce cas particulier, la présence d'une fourchette d'hypothèses serait fort utile.

Enfin, en ce qui concerne les recommandations du chapitre 4, elles se séparent en deux parties. Ces recommandations s'appuyant sur un ensemble de connaissances beaucoup plus vaste que celui des seules perspectives, ne me semblent pas nécessairement remises en cause par les réserves méthodologiques que j'ai énoncées plus haut. Certaines d'entre elles auraient cependant avantage, à mon avis, à être confrontées à une nouvelle version des populations projetées. Il s'agit de quelques recommandations faites, dans une première partie, aux politiciens. Cependant, vu la faible qualité des données sur lesquelles l'auteur du rapport s'est vu obligé de s'appuyer, les recommandations aux chercheurs, qui s'adressent sans doute également aux bailleurs de fonds, et qui vont dans le sens d'une meilleure collecte de données me semblent tout à fait pertinentes.

NOTE (1)

Cette façon de procéder suppose que l'accroissement annuel en terme d'effectif a été constant et elle donne l'accroissement relatif, ou le taux d'accroissement, de la première année. Pour reprendre l'exemple de Hay River, l'accroissement annuel serait de 200 (4392 - 22) et l'"accroissement moyen" de 13.1% (200 - 1528), c'est-à-dire la moyenne des accroissements annuels (4392 - 22) divisée par la population au début de la période. Cet indice n'a pas une grande signification car il est fondé sur l'hypothèse d'un accroissement constant en terme d'effectif. De plus, ce choix de l'effectif initial pour calculer un taux masque le fait que suivant cette même hypothèse d'un accroissement annuel constant (200), posée par l'auteur, l'accroissement relatif, pour la dernière année, la 22ème, serait de 3,50% (200/5720).

Il aurait été préférable de calculer un taux d'accroissement annuel en supposant que la population s'accroit à un rythme constant comme dans une population à croissance géométrique en utilisant la formule suivante:

$$P_{22} = P_0 (1 + r)^{22}$$

ce qui est équivalent à:

$$\text{Log } (1 + r) = \frac{1}{22} \text{ Log } \left[\frac{P_{22}}{P_0}\right]$$

$$\text{Log } (1 + r) = \frac{1}{22} \text{ Log } \left[\frac{5920}{1528}\right]$$

$$= .0267$$

et

$$1 + r = 10^{.0267}$$

$$r = 10^{.0267} - 1$$

$$\boxed{r = .0634}$$

Dans plusieurs tableaux du rapport (2.1, 2.12, etc.) c'est d'ailleurs cette dernière formule qui a été utilisée pour calculer l'"accroissement moyen" qu'il aurait été préférable d'appeler le "taux d'accroissement annuel".

Robert Bone

Merci Norbert. That completes the interpretive comments on Dr. Hamelin's paper. We have had the former Senior Science Advisor to the Commission of the Northwest Territories give his comments and describe some interesting political implications. We have had Dr. Lloyd, scholar of the North for many years give his interpretation, and finally the methodological analysis by Dr. Robitaille.

Well, shyness never afflicts the Chairman and I would like to ask Dr. Hamelin this question. In his study, Dr. Hamelin comments on a "back to the land" trend in terms of new settlements. In some way these settlements could be considered unorganized in the sense that they are more camps than a permanent kind of settlement with normal services and so on. Is this really an ephemeral development which is perhaps due to the present social circumstances or can we find, more than in speech, or an emotional feeling, that there is some substance, that there is some permanency, that this is a significant trend that a number of northern people will elect for the long term?

Louis-Edmond Hamelin

My answer is this - about 5% of the indigenous people of the Northwest Territories, mostly Inuit, will follow this "back to the land" movement. Maybe ten or fifteen new, very small settlements can be opened up. I don't expect more than that. Five percent. Is it just emotional? Of course, this business of land settlement encourages some indigenous people to go back to the land. There is some emotion in it but may be there is also a physical feeling to smell the land, to be there.

I expect 5% but I have not received the last statistics this winter, I don't know how many went into the bush this winter. But if it is 5%, it's small, a small phenomenon, and it will influence about four hundred students that will not go to school. There we have four hundred students among ten thousand so again it is something, but the future of the Territories is not there.

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The Committee on Northern Population Research

Since its formation in 1977, the purposes of the Committee have been to:

(a) encourage northern population studies to be undertaken by universities, as well as government and other agencies;

(b) establish an informal clearing house of information pertaining to sources of northern demographic data;

(c) prepare the organization of workshops on northern population problems to be held in the North and to involve a large measure of direction and participation by the autochthonous people;

(d) plan one or more longer-term research programs to be carried out, in the main, by university based researchers;

(e) submit to appropriate bodies, for their consideration, briefs or reports on matters pertaining to the collection, analysis or reporting of demographic data.

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Le Comité de Recherche sur les Populations Nordiques

Depuis sa création en 1977, le Comité s'est efforcé à:

(a) encourager les agences gouvernementales et autres, ainsi que les universités à entreprendre des études sur les populations nordiques;

(b) établir un service de l'information en démographie nordique;

(c) préparer l'organisation de colloques portant sur divers problèmes touchant les populations nordiques; ces colloques, tenus dans le Nord, devront impliquer une participation active des autochtones;

(d) planifier un ou plusieurs programmes de recherche à plus long terme, ces programmes devant être menés principalement par des chercheurs universitaires;

(e) soumettre pour considération aux organismes appropriés, des rapports ou des résumés ayant trait à la collecte, l'analyse ou les compte-rendus de données démographiques.